Ph. D. in MUSIC EDUCATION

THE INTERACTION

OF AUDIENCE-LISTENING AND COMPOSING :

A STUDY IN CYPRUS SCHOOLS

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ABSTRACT

Part One of this thesis establishes the setting in which the study took place. In order to accomplish this the following areas are covered:

1. The Background of the Cyprus Educational System.
2. The Organisation and Structure of the Cyprus Educational System.
3. The School System in Cyprus.
4. Music in Education in Cyprus , with Special Reference to its Development, the Teaching of Music in both Primary and Secondary Schools, the Qualifications and Recruitment of Music Teachers, the Musical Activities as they Relate to Children's Musical Development and the Cyprus Chamber and Youth Orchestras.

Part Two examines the theories of distinguished music educators relevant to this study as well as various aspects of current practices introduced in documents published by the Department of Education and Science (United Kingdom), with reference to the parameters of music education in terms of composing, audience-listening, and performing, and their inter-relationships within a holistic approach to music. Furthermore it examines the findings and theories of developmental psychology, explains mental activities in the processing of musical stimuli and proposes a model which shows the relationship between audience-listening and composing.

Part Three investigates the validity and the reliability of the Swanwick - Tillman spiral of musical development mapped out in 1986 (BJME 3, 3, Nov. 1986). Firstly, by drawing from the writings of eminent music educators and psychologists the musical and developmental validity of the Swanwick - Tillman spiral of musical development was established. Secondly, a research project was carried out in Cyprus which tested its reliability. After this research, which gave supportive results, further research was conducted in Cyprus to investigate the extent to which audience - listening may influence composing, something which is assumed but has never been investigated. The evidence from this further research suggests that the experience in audience - listening influences composing, and we can anticipate more confidence in the higher modes of the Swanwick - Tillman musical developmental spiral.

Part four, according to the findings of the research, includes conclusions, implications, and recommendations concerning curriculum development, assessment and evaluation, music criticism, the teacher, classroom instruments, accommodation, and equipment in music education, with special reference to the Cyprus music educational system.

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INTRODUCTION

A challenging issue closely linked with the realm of music education today was found to need investigation and to be answered. Believing that audience-listening is a sine qua non musical activity in music education, the researcher felt that music teachers must seek effective ways of promoting it in relation to the other two parameters of music education those of composing and performing. Initially, in an investigation, the relevant literature dealing with the parameters of music education, and their inter-relationships within a holistic approach to music, was explored. Afterwards the findings and theories of developmental psychology were examined in relation with mental activities in the processing of musical stimuli and a model which shows the relationship between audience-listening and composing was proposed. The following pages refer to many of the ideas and theories which were examined prior to attending to the central concerns of this study.

Although it is assumed that audience listening may influence composing it has never been investigated. Therefore the specific concerns of the research study are to examine the interaction of audience-listening and composing and, specifically, the extent to which audience-listening may affect composing, and to provide new information before drawing out implications for general music education. The investigation in this specific area of music was facilitated by using the Swanwick-Tillman spiral of musical development mapped out in 1986 (BJME 3, 3, Nov. 1986); particularly the criteria set for assessing compositions. After having been

tested for its validity and reliability, the Swanwick-Tillman spiral of musical development provided the instrument of assessment for the research project. This was attained by synthesising relevant knowledge from the fields of music psychology, cognitive psychology, the theory and practice of music and art education, as well as by carrying out experimental research work, in which a qualitative analysis of the interaction of audience-listening and composing was made.

The research project was mainly carried out in Cyprus while developments in music and music education were taking place according to new trends and approaches already applied in countries with a longer tradition in European Music. In order to familiarise the reader with this unique setting, detailed information about the organisation and structure of the Cyprus educational system is provided.

The study should be viewed in relation to general music education, and the intention of the researcher is to make in the light of the findings, a contribution beyond purely theoretical aspects towards practical developments in music education in Cyprus which may also have a wider applicability.

PART ONE

CYPRUS, THE EDUCATIONAL CONTEXT WITH SPECIAL REFERENCE TO MUSIC IN EDUCATION

CHAPTER 1

THE BACKGROUND AND STRUCTURE OF THE CYPRUS EDUCATIONAL SYSTEM

1. Brief Historical Notes on School Education in Cyprus

Although the history of Cyprus begins about 6000 B.C. we find no traces of education, except after the settlement of Mycenean Greeks in Cyprus and about 1,050 B.C. During that period and especially at the beginning of the 1st millenium epic poetry appeared and gradually developed. A famous example are the "KYPRIA EPI" which are attributed to Stasinos and were composed in the form of eleven books in the 8th or 7th century B.C. They refer to the abduction of Helen of Troy by Paris and are considered as an introduction to the Iliad by Homer.[1] Special mention should be made here to the founder of Stoic philosophy, the Cypriot Stoic philosopher Zeno of Kition, who was born at Kitium in 560 B.C. and died in Athens in 510 B.C. During that period in the 5th and the beginning of 4th century king Evagoras I of Salamis developed the cultural and educational life of Cyprus. Evagoras protected and supported literary men, artists and philosophers and it was during his reign that the Greek alphabet was introduced into the island. During the Hellenistic period Cyprus developed a kind of education under the Ptolemies of

[1]. Epistimi Ke Zoi (Science and Life), an Encyclopaedia, Hadjiacovou S.A., Thessaloniki, Greece, Vol.17.p.218.

Egypt (323 - 58 B.C.). Libraries were established at this period for the first time in the island.

In the long years of the Turkish occupation, which lasted more than three centuries from 1571-1878 A.D. no improvement to education was made. During this period and especially during the 18th and 19th centuries we find that the rudiments of reading were provided by the local priest to boys (not girls) in the churches at night. This was done secretly because any kind of education was prohibited by the Turkish authorities. After 1821 some freedom was given and some primary and secondary schools were established in the towns by the Church and the community leaders, but again such education was inadequate and unsystematic. Special mention should be made here of the role of the Greek Christian Orthodox Church for the preservation of the heritage, religion, culture of the Greek people of Cyprus and the provision of their education.

Under these conditions the education in the island was at a very low standard, and it is described very vividly by the first British High Commissioner in his annual report in 1879.

"The majority of the agricultural population have received little or no education. In many villages not a single person can read or write and the education of the women is almost neglected".[2]

[2]. Public Information Office (1971) Education in Cyprus, Printing Office of the Republic of Cyprus, Nicosia, p.4.

Education of a more organised kind came with British Administration, which followed that of the Turks in 1878. Towards the end of 1880 Rev. Josiah Spencer B.A., was appointed Director of Education. He secured the appointment of village committees, realized the need for better qualified teachers and the value of Grant-in-Aid for the improvement of the situation.[3]

Gradually the colonial authorities assumed responsibility for the primary education, which they developed towards the proper direction into a well organised system based on modern ideas. But they had little or no control over what followed in the Greek Secondary Education. The Turkish Secondary Education accepted the British administration system, and all Turkish secondary schools became Aided Schools.[4]

After the proclamation of the Cyprus Republic on the 16th August 1960 Education of the two communities was separated. Two Communual Chambers, one for the Greek and the other for the Turkish community, took over the responsibility for education. In 1965 the Greek Communual Chamber was abolished and the Ministry of Education was established by Law 12 of 1965. Thus the administrative responsibilities for educational, cultural and teaching matters were transferred to the Ministry of Education. [5]

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[3]. Anastassiades, Andreas G., (1979) The Development of the Administration of Elementary Education in Cyprus, "Theopress" Ltd., Nicosia, p.21.

[4]. Karagiorges, A.G. (1986) Education Development in Cyprus (1960-1977), "Theopress" Ltd., Nicosia, p.25.

[5]. Parartima Proton tis Episimou Efimeridos tis Democratias (First Supplement of the Official Gazette of the Republic) No. 398 of the 31st March 1965, p.326

In August 1974 Turkish armed forces invaded and occupied the northern part of Cyprus and brought the complete separation of the two communities. Since that date no reliable information has been obtained on the development of Education of the Turkish community.

2. The Organization and Structure of the Cyprus Educational System

On the 31st of March 1965 the Ministry of Education took control of all educational and cultural matters of the Greek community and the other Christian minorities and continued to work on the same lines set up by the Greek Communal Chamber.

The public educational system in Cyprus is highly centralised. The Ministry of Education is responsible for the enforcemenent of educational laws and the preparation of educational bills. It lays down policy, makes regulations, prescribes sylabuses, curricula and text - books. An independent five - member body, the Educational Service Commission, appointed for a six year period by the President of the Republic, appoints, transfers and promotes educational officers, headmasters and teachers. The Ministry of Education, through its inspectors, supervises school work and helps teachers to put into practice new methods of teaching.[6] The construction, maintenance and equipment of school - buildings are the responsibility of school committees. In urban areas these committess are appointed by the Council of Ministers, while in the rural areas are elected by the communities.

[6] Republic of Cyprus (1993) Statistics and Research Department, Statistics of Education in Cyprus, School Year 1992 - 1993, Nicosia, pp.28 and 29.

The administrative centre is the Ministry of Education. At the top of the pyramid is the Minister of Education who is appointed by the President of the Republic of Cyprus and is a full member of the Government. The rest of the staff are civil servants whose work is organised into a number of departments or services. Apart from the Director General who is answerable to the Minister of Education there are four departments for the school system: The Department of Primary Education which is responsible also for Pre-Primary Education, the Department of Secondary Education, the Department of Technical and Vocational Education and the Department of Higher Education. [7] The administrative work of the Departments is assisted by the inspectorate. There are three bodies of inspectors: One for pre-primary and primary schools, one for secondary and one for technical schools. The main drawback is the departmentalization of the educational system which prevents co-operation, interaction and co-ordination between the departments. We hope that in the near future an effort will be undertaken towards the unification of the educational system.

3. The School System in Cyprus

The Education system of Cyprus has four stages: Pre-Primary, Primary, Secondary and Higher.

[7] Appendix 1
The diagram in Appendix 1 shows the Organization of the Scholol System adapted from: Statistics of Education in Cyprus, School year 1992 - 1993, Published by the Statistics and Research Department, Nicosia, 1993, p.97.

3.1 Pre-Primary Education

Pre-Primary Education in Cyprus is developing steadily. Its purpose is to provide pre-primary education and care for children who are in the age-group 2-5. The table below shows the pre-primary institutions both public and private and the enrolments of pupils in 1970-71 and 1992-93.[8]

TABLE 1 The Development of Pre-Primary Education

School Year	Pre-Primary Institutions Public/Private	Enrolment of Pupils Public/Private
1970-71	9 / 100	511 / 3,814
1992-93	218 / 390	8,082 / 16,895

3.2 Primary Education

Primary Education in Cyprus has always been free and since 1962 has become compulsory. Children begin their primary education at the age of 5½ and leave when they have completed the prescribed six year course or have reached the age of 13,

[8] Republic of Cyprus (1993) Statistics and Research Department, Statistics of Education in Cyprus, op.cit., pp.53 and 55.

whichever comes first. In some cases the primary school is differentiated into a lower and a higher cycle (3 and 3 years).

The training of primary school teachers is effected locally at the Pedagogical Academy during a 3 year course. Entry to the Academy is open to all secondary school leavers provided they are successful at a high competitive entrance examination. Since 1990 the training of primary school teachers is also effected at the Pedagogical Departments of Pre-Primary and Primary Education of the Greek Universities. From September 1993 the successful candidates, after a highly competitive examination were the first entrants to the Cyprus University, which commenced operation in September 1992.

The school year begins in early September and ends by the end of June. The pupil/teacher ratio in the school year 1992-93 was 19.1 and the enrolments 64,313 pupils.[9]

3.3 Secondary Education

Secondary Education is pursued at both public and private institutions. It is free up to the age of 18 and compulsory up to the age of 15. All secondary schools offer a six year course to pupils in the 12-18 age group.

The curriculum for the first three grades (normally up to the age of 15) is of a general nature. This first cycle is called gymnasium and compares with what is happening in England with the first three years of basic education. At the second stage which

[9] Ibid., p.20

comprises the last three grades we have the option period. This cycle is called (LEM) Lyceum of Optional Subjects and the pupils opt according to their interests and abilities for one of the following fields: classical, science, economics, commercial/secretarial and foreign languages. At the second stage there are also Technical and Vocational Schools which aim at preparing technicians and craftsmen for the local industry.

During the school year 1992-93 the enrolments were 51,641and the pupil/teacher ratio was 12.8[10] .

3.4 Higher Education

Cyprus provides Tertiary higher education to 6,253 students in comparison to 9,066 Cypriot Students studying abroad. In 1992-93 there were 31 public and private post-secondary institutions.[11]

The University of Cyprus is established by law 144 of 1989 and commenced operation in September 1992. In its first year of operation the Cyprus University has accepted 400 students, who have passed highly competitive entrance examinations.

The Cyprus University has started its operation with the following three schools: School of Pure and Applied Mathematics, School of Economics and Management and the School of Humanities and Social Sciences.

[10] Ibid, p.20.
[11] Ibid, pp.21 and 23.

I am sure that the operation of the Cyprus University will contribute to the further development of the economic, social, educational and cultural life of the island and we hope that in the near future a school of music will be established within the Cyprus University. We believe that the ground is ready, for this establishment, which will be a promoting feature of music for both educational and cultural reasons.

3.5 Special Education

According to the Law 47/49 for special education, special education programmes are also provided for mentally and physically handicapped children in special schools and institutions. During the school-year 1990-91 the number of pupils in Special Schools was 615[12]

3.6 Non-formal Education

In Cyprus there are also a number of other schemes offering apprenticeship training, vocational training, literacy, retraining and upgrading at various levels. During the school year 1992 - 1993 the total enrolments of pupils in part - time courses were 71.806. In addition, 12.126 persons attended the adult education centres.[13]

[12] Ministry of Education, Development of Education 1990 - 92, National Report of Cyprus, International Conference on Education, 43rd Session Geneva, Nicosia, 1992, pp.33 - 34.
[13] Statistics of Education in Cyprus, op.cit., p.23.

CHAPTER 2

MUSIC IN EDUCATION IN CYPRUS

1. The Development of Music Education in Cyprus.

Although cultural and educational life in Cyprus can be traced in the Homeric period the development of music education in Cyprus was rather slow in comparison to other developed countries in the world. The interrelation of political, economic, social and cultural factors affected the normal evolution of Music in Cyprus and they prevented the influence of European Music in the Educational curriculum and the creation of a tradition. To a certain extent the political problem was a deterring factor which affected the normal evolution of European Music in Cyprus.

Until the British occupation (1878 A.D.) only the Byzantine and the folk music existed in Cyprus the former to churches and monasteries and the latter to various social events.

When the English came to Cyprus European Music had just begun being played in the island, at some evening parties at home, mainly by foreigners, at the consulates in Larnaca and at a small number of coffee shops and places of entertainment.[1] Although we do not know exactly when the first concert was given in Cyprus we can

[1]. Panayiotou, Nicos (1985) I Mousiki stin Kypro ton kero tis Agglokratias (Music in Cyprus during British Rule), Cultural Service of the Ministry of Education, Nicosia, p.9.

support the idea that the growth of interest in European Music began after 1878, when private schools of music and music societies were established and laid some of the foundations leading towards future developments in music.

The introduction of music into the school curriculum has contributed to the normal evolution of interest in European Music. In the school year 1948-49 we find that an organising teacher of music in elementary education was appointed to improve the teaching-learning situation and to help teachers to gain greater competencies.[2]
In the secondary education and especially in the most famous secondary school of Cyprus "The Pancyprian Gymnasium" apart from Byzantine Music which is vocal, also intrumental music was taught by foreign teachers such as V.E. Arabian (1909-1911), Angelo D' Anna (1911-1912).[3]

After independence in 1960 many efforts were made for further musical development. More private music schools and musical societies were established and the introduction of music education into the schools in a more organised way laid the foundations which formed the basis for the creation of a better musical life in Cyprus. In the school year 1960-61 the first Inspector of Music for Secondary Education was appointed to organise music in secondary schools and to improve the teaching-learning situation. For primary education the music Inspector/ adviser was playing his role in elementary schools in which music was existing in the form of

[2]. Anastassiades, Andreas G. (1979) The Development of the Administration of Elementary Education in Cyprus ,Theopress Ltd, Nicosia, p.72.

[3]. Panayiotou, N., op.cit., p. 15.

singing, instrument playing, mainly on mandolines, melodicas and unpitched percussion intruments and to some extent with notational work.

After the Turkish invasion in 1974 the current approaches of music in education were applied experimentally in few schools and around 1980 gradually were spread to more schools. This success was due to the fact that the writer was awarded by the Overseas Development Administration a Commonwealth Education Study Fellowship and studied in the United Kingdom for two years. During his post-graduate studies he was informed about the current trends in music in education and got acquainted with the new ideas which formed a sound foundation for the development in 1980 of the new curriculum in music for primary education and in 1987 for secondary education. I believe that the financial potential and the cultural orientation of Cyprus make it imperative that Cyprus should acquire a sound music education something which is gradually happening, due to the spreading of the new ideas to more and more schools through inservice training courses.

2. The Teaching of Music in Cyprus Schools

2.1 The Music Teacher in the Cyprus Schools

As far as Cyprus schools are concerned there are the following main categories of music teachers:

Firstly, the teachers who hold professional qualifications in music and come through universities, colleges and conservatories considering themselves as musicians

(composers, performers, instrumentalists, singers etc). Rarely have these teachers received any pedagogic training. These teachers are employed mainly in secondary education. Secondly, the teachers who are graduates of the Pedagogical Academy of Cyprus, after a three-year course and hold, apart from their teacher's diploma, a music diploma awarded by a local conservatory. These teachers can also teach other subjects and they often do so in the Primary Schools.

Thirdly, there are the teachers who are graduates of the Pedagogical Academy of Cyprus and have specialized in music during their third year of training as teachers. These teachers teach the subject satisfactorily in the lower classes of the primary school and to some extent in the higher classes too.

Finally, there are the teachers who apart from their teacher's diploma have no musical qualifications but have agreed to take charge of much music teaching in a primary school. Some of them take music because they are keen and interested in the subject and others because there is no one willing to attempt it. From what has already been mentioned above it is obvious that there are various categories of music teachers in Cyprus schools who have little in common in their training and during their service there is no contact between them.

It should be said that the musical educational development in Cyprus is much dependent on teacher development.

2.2. The Musical Activities in Relation to the Children's Musical Development in the Cyprus Music Educational System

In the Cyprus educational system music has suffered more than other curriculum subjects. The recent approaches and trends were put into practice after 1974. According to contemporary trends in music education in Cyprus, children are involved in a variety of activities such as: listening to music, singing, using instruments both commercial and home-made, making songs and music, reading and writing music, moving to music, creating sound effects, creating instrumental music, integrating music with other subjects, harmonising music and orchestrating music. The activities of music as they function in the Cyprus educational system is an enormous field to be covered. The following is a summary of the basic musical activities:

Firstly, singing comes foremost among the resources that are available at any time in the day and the children derive much pleasure by singing a variety of songs. Secondly, by playing pitched and unpitched percussion instruments, recorder, mandolin, guitar and other instruments they develop musical skills and they gain the desire to improvise and create their own music. Thirdly, by creating and re-creating music children have many opportunities for self expression and utilize the musical skills and the understanding which they have acquired. Fourthly, by moving with music children have another form of musical expression and investigation through which they may develop musical understanding. In addition, by listening to music as

audience-listeners, children are provided with an internal form of musical development and aesthetic experience. Finally, reading and writing music provides children with permanent records of what they have experienced in music and enables them to study it at their own pace.

The activities mentioned above provide children with different skills as well as musical knowledge, which are equally important factors in their responsiveness to music. For this reason, in guiding children towards musical development, it is indispensable to develop their awareness of the elements of music which are: (a) rhythm, (b) melody, (c) harmony, (d) form, (e) expression, and (f) style. In order to understand the elements of music children become acquainted with their related concepts.[4]

In the Cyprus music educational system the elements and concepts of music are offered to the children in a variety of musical activities which evoke their responsiveness to music.

[4]. Ministry of Education Cyprus (1981), Curriculum for Primary Schools : Music, Nicosia, pp. 221-237.

2.3. Music in Primary Education

2.3.1 The Current Trends in the Primary Music Education Curriculum

As I have mentioned above changes are gradually taking place in the Cyprus music educational system, especially in pre-primary and primary education and are bringing about happy results, because they are based on well-defined needs, are well planned and are supported adequately by well trained personnel and good available facilities.

Present-day music teachers in primary education in Cyprus organise their music lessons in such a way, as to give every pupil the chance to participate actively and to learn the terms of theory through practical work. And indeed, they succeed to a great extent in their task, because they organise their school-room as a workshop, which assists them in using child-centred methods instead of teacher-centred. And it is the child-centred approach, which has some roots in Rousseau's "Emile" and has been further developed by Pestalozzi, Froebel and Dewey, which is the most appropriate teaching model in Music Education, because it aims more at learning than at teaching.

With the child-centred view the teacher helps everybody to be involved in a learning-teaching situation and gives every opportunity to the pupils to explore, to discover and to experiment with sound through various creative activities. Furthermore, in the place of formal teaching the teacher devotes time, to discussion

groups, workshops and choice of activities and he uses a flexible time table in order to provide his pupils with musical experiences.

In several schools, music is not primarily a subject to be talked about but something to be made. And it is the children who must do most of the making and develop musical concepts through different activities. In the new music curriculum for Primary Education there are the following activities which usually do not function separately:

(a) Singing (b) playing instruments (c) creating and recreating music (d) moving with music (e) listening to and (f) reading and writing music.

2.3.2 Time, Classroom Instruments, Accommodation and Equipment

The time allotted for music on the timetable is two forty-minute periods per week in a school with a staff of six teachers and over, going down to one period of 30 minutes in small schools. The timetable is arranged by the headmaster, but the time which is devoted to each subject is set by the Ministry of Education.

Although in the lower classes of the Primary School there is the tendency for integration of subjects, the timetable exists and children know that they have music on such and such day and time. This does not prohibit the teacher from transferring

a lesson to another period, according to the needs of the moment, unless a specialist music teacher visits her class to help.

Nowadays, with the efforts which are made for the re-organisation of music in the Cyprus educational system many primary schools have managed to have classroom instruments, space and other equipment. Also to a great extent the pupils in primary education buy their own instruments, usually recorders, mandolines, guitars, and melodicas and they use them during the music lesson.

In cases where there is a lack of pitched percussion instruments, space and other equipment, efforts are made between the Ministry of Education, the School Committees, the Headteachers and the Parent-Teacher Associations to provide the necessary equipment and space in order to satisfy present day requirements.

2.3.3 Choirs and Orchestras

Pupils in primary schools work and produce choirs and orchestras that do credit to their schools. They perform at the School Hall gatherings, at religious and national celebrations, and on other special occasions. Also they sing and play in performances arranged in the main towns and in the capital before a big audience. The level of these concerts, according to the opinion of well-known musicians and the local press critics is of high standard. The best of the songs from these manifestations are presented by the Cyprus Television and are broadcast by the radio in special programmes.

2.3.4 The Standard of Music in Primary Education

Despite various difficulties the standard of music in many Primary Schools in Cyprus appears to be high, according to the opinion of well-known Greek and foreign musicians and educators who have visited some of our schools. This is due, in my opinion, to the musicality of the Cypriot people, the natural tendency of children towards music, the re-organization of the subject and finally to the interest of parents and teachers. Mrs Avril Dankworth in her report to the Ministry of education writes:

> "Having met Mr. Stavrides at a Music Course for British SLEA Teachers, he very kindly arranged for me to visit Drosia Elementary School. The afternoon programme began at 2.30 with a programme presented by the School Choir of top class girls and boys under the direction of Mr. John Constantinou; this consisted of a number of songs impressively sung in three parts, accompanied by a well-balanced intrumental group of mandolines, guitars, melodicas, recorders, glockenspiels and percussion. After this, I experienced a class of third year children having a music lesson given by Mr Demetrios Ioannou. There was an excellent mixture of singing, notational work and playing on recorders and percussion instruments.
>
> In both sessions I was impressed by the happy atmosphere of involvement and the fine integration of singing and playing which accords so excellently with the present world climate of music in education..."[5]

Bryan Hesford, an examiner of Trinity College, in his article "Music making under adversity" says:

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[5]. Dankworth, Avril , Report on Music in Schools, 22.5.1975, Ministry of Education File No.106/74/2, Didaskalia tis Mousikis Sta Dimotika Sholia (Teaching of Music in Primary Schools)

"... Perhaps the most moving experience came when I was asked to visit an Elementary School in Larnaca and meet the staff and children who played and sang for me. I've never heard Bach's little G major Minuet played in two parts by mandolines and guitars before! Oh yes, there was one little boy who wanted to join in on his recorder but he was a little out of tune they thought!

He joined in and made sweet music! The proud Greek Cypriots, are rebuilding their lives and music is playing a vital role. We at Trinity have a vital role to play as well in giving all we can to people who in adversity give so much to those whom they meet". [6]

Ulrike Jungmair, prominent member of the Carl Orff Institute in Salzburg in her report to the Ministry of Education writes:

" I attended a class at the Ayios Andreas Elementary School in Nicosia. The teacher showed very impressive work. Many ideas follow the pedagogical ideas of Orff- Schulwerk, the use of instruments, accompanying songs as well as creating sound. Listening to music, rhythmic work, sensitivity training and movement gave a full view into his work. I was mostly impressed by the atmosphere, the way children talked to their teacher, and the way he kept contact with them. Group work showed the social behaviour among the children. I am sure that there are many points which are of basic importance for collaboration with the Orff Institute". [7]

Glyn Hughes, in writing his impressions from a seminar in music, mentions the following:

" ... Hearing the teachers at part of the seminar with their highly musical use of sounds, speech and varied instruments, even using stones softly sliding in a container, even animal sounds and the adornment of Cypriot folk songs and dance rhythms, I would say that

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[6]. Hesford, Bryan , article "Music making under adversity", File No.106/74/2, (1974), Didaskalia tis Mousikis sta Dimotika Sholia (Teaching of Music in Primary Schools)

[7]. Jungmair, Ulrike, Report on Music in Schools, 27.4.1976, Ministry of Education, File No.106/74/3.

Ulrike Jungmair has contributed to the further development of the already high standard of musical enjoyment in Cyprus schools..." [8]

Richard Addison, Lecturer in Music Education at the University of Newcastle-upon-Tyne in his report to the Ministry of Education writes:

"I was taken to see a total of 9 teachers at work in Nicosia, Limassol, Larnaca and Paphos, watched a lesson given by each, and was able to talk with all of them, discussing both problems and future developments.

All of them were specialist music teachers, and I was very impressed indeed with the high standard of their teaching. They kept their children alert and interested by frequently varying activities, but each activity was developmental, and contributed not just to the enjoyment, but also to the understanding and skill of the pupils. Considering that in every case I was watching the first lesson of the term, I was amazed at the technical achievements of the pupils, who showed no sign of having neglected their instruments during the long summer break. I was impressed with the way instruments were used in the classroom situation, and not confined to out-of-school activities, as they tend to be in Britain, and it seemed to me also that all the teachers had a unity of purpose which was most refreshing to witness. The purpose of my visit was to encourage creativity. In the schools I visited, I saw one example of this actually happening, and I was delighted to see that the children re-acted with the same enthusiasm and skill that I have observed elsewhere. In a very few minutes every child in the class had put together some small musical piece of which he/she could be proud.

Later I talked to all the teachers about this aspect of education, and played a few examples on tape. I sensed an enthusiasm for the ideas, but also a worry that something of their present achievement might have to be sacrificed to accommodate it.

I should be the last to want any of the present achievements to be sacrificed, but experience leads me to believe that a little time spent on creative enterprises results in quicker learning and greater achievement on the more formal side-presumably because of greater enthusiasm and motivation by the pupils, through pride in their creative achievements.

[8]. Hughes, Glyn, article "The Cultural Landscape", Cyprus Mail 2.10.1977.

I look forward to teaching and learning developments in Cyprus over the next few years, and, judging from the progress made in the last few years, it will not be long before Cyprus is one of the showplaces of the world for Primary Music Education". [9]

2.4 Music in Secondary Education

2.4.1 The Current Approaches of Music in Secondary Education

The general aim of music in secondary education is the musical education of all the pupils and not only the talented in singing. To achieve this goal various musical instruments have been introduced and provide opportunities to all pupils to participate and to express themselves. [10]

The music in secondary education is based on three activities: singing, using musical instruments and musical appreciation. The Inspector of Music in Secondary Education says "All the elements of Theory, the History of Music, Form and Knowledge of Instruments must come out of singing, musical appreciation and creative work and must not form a separate, purely theoretical branch".[11]

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[9]. Addison, Richard, Report of his visit to Cyprus, Sept. 12-23, 1979, Ministry of Education File No.106/74/5

[10]. Didaskalia tis Mousikis sti Mesi Ekpedevsi (Teaching of Music in Secondary Schools) Ministry of Education, File No.127/71/2 .

[11]. Didaskalia tis Mousikis sti Mesi Ekpedevsi (Teaching of Music in Secondary Schools), Ministry of Education, File No.127/71/3.

An emphasis is given on the teaching of many songs of various kinds, which are used as a vehicle for teaching rhythmic and melodic concepts. Also songs are taught by ear. Many songs are played, according to the pupils' ability, on various instruments such as recorders, guitars, mandolines, pitched and unpitched percussion instruments. Through songs and musical instruments the pupils learn the theory of music in practice and acquire musical knowledge in a lively way. Also through creative activities the pupils are led to the exploration of sound, descriptive music, the composition of tunes, the setting of poems to music etc, which help pupils to develop their initiative and to express themselves through sound.

An integral part of the music lesson in secondary education is the musical appreciation, which is included in almost every period devoted to music. It takes 10-20 minutes depending on the work and the class. At the Lyceum it can take up the whole lesson. Through musical appreciation the pupils acquire a knowledge of form, instruments and the history of music apart from the main purpose, which is "the creation of a good audience".[12]

2.4.2 Time, Classroom Instruments, Accommodation and Equipment

At the Gymnasium (the three lower classes of Secondary Education) the time allotted to music is two forty-five minutes periods per week for the first and second forms and one period per week for the third form. At the Lyceum (the three upper

[12]. Didaskalia tis Mousikis sti Mesi Ekpedevsi. (Teaching of Music in Secondary Schools), Ministry of Education, File No.127/71/3.

classes of Secondary Education) music is taught for one period per week as a part of the compulsory subjects in the first form. In the second and third forms music is an optional subject and pupils are encouraged to select also music among other subjects of aesthetic education.

In order that the music lesson can satisfy present day requirements each secondary school should have adequate classroom instruments, specific accommodation for music and the necessary equipment. This problem is gradually solved and nowadays most of the secondary schools are well equipped and supplied with classroom instruments and other necessary equipment. In the school year 1991-92 seventy-five out of eighty five secondary schools, 56 Gymnasium and 29 Lyceums, managed to have specific accomodation for music.[13] In new schools which are being built, efforts are made to provide not only a music room but also small areas for storing musical instruments and small rooms for individuals to practise their musical instruments.

2.4.3 Musical Activities

The pupils in secondary education can participate in the following musical activities, which are run by the music teachers:

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[13]. Didaskalia tis Mousikis sti Mesi Ekpedevsi (Teaching of Music in Secondary Schools), Ministry of Education, File No.127/71/5.

2.4.3.1 Choir

Although participation in the school choir is not compulsory all secondary schools have their choir, which is usually accompanied by a piano or by an orchestra. In large schools exist two choirs: one for the upper classes and one for the lower classes. The choirs perform on various occasions. Their repertoire includes folk tunes, pop songs and songs by classical and modern composers, Greek and foreigners. They rehearse during the prolonged break, usually thirty minutes, at 10.30 a.m.

2.4.3.2 Instrumental music

Orchestras formed by using recorders, guitars, mandolines and pitched percussion instruments exist in all schools and they perform on special occasions. They practise during the long break.

2.4.3.3 String orchestra

In two schools, one in Nicosia and the other in Limassol, string orchestras exist formed by 1st Violins, 2nd Violins, 3rd Violins, Cellos and Double Basses. The members of these orchestras learn their instruments either in conservatories or by private tuition, which is supplied, by payment, by various instrumentalists. These orchestras rehearse during prolonged breaks or during out of school hours.

2.4.3.4 Recorder Ensemble

Two schools have a complete Recorder Ensemble (descant- alto-tenor and bass recorders), which is trained and conducted by the music teacher.

2.4.3.5 Band

Some schools have a band which is trained during prolonged break or during out-of-school hours. They perform in various school manifestations and in parades taking place on national days.

2.4.3.6 Groups of light music

Apart from the above mentioned activities other groups exist. A number of schools have groups practising and performing light music at a high standard and to some extent comparable to professional groups of this kind. These activities are encouraged and the music teachers are involved both in organising and performing of these groups.

The activities mentioned so far play a vital role in various programmes organised during national and religious celebrations as well as at School-Concerts, taking place usually at the end of the school year.[14]

[14]. The information about the musical activities in Secondary Schools were provided to the writer by the Ex-Inspector of Music in Secondary Education Mr. Christodoulos Achilleoudis.

3. The Cyprus Chamber and Youth Orchestras

The establishment of the Cyprus National Chamber Orchestra and the Cyprus National Youth Orchestra were very important events, which laid the foundations for further musical development. The decision for the foundation of the orchestras was taken by the Council of Ministers on the 5th of March 1987 and the exacting task of giving effect to the decision was laid on the Cultural Service of the Ministry of Education.

The Cyprus National Chamber Orchestra usually is an orchestral group of 23 part-time string instrumentalists, 8 first violins, 7 second violins, 4 violas, 3 cellos and 1 double bass[15]. Sometimes extra players for wood wind and brass either from Cyprus or professionals from Greece play with the orchestra.

The writer had the initiative to set up, for the first time in Cyprus, the National Youth Orchestra. He worked in close collaboration with the Cultural Service of the Ministry of Education, especially with Mr. Nicos Panayiotou cultural Officer A', Ministry of Education and they managed to overcome various difficulties and to set up in January 1988 the Cyprus Youth Orchestra. The orchestra consists mainly of pupils from secondary education, but there are also older members up to the age of 29. They meet once a week on every Saturday morning for three hours and they prepare specific music programmes.

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[15]. The Programme of the Concerts on the 1.6.1992 and 3.6.1992 in Nicosia and Limassol, respectively.

The Cyprus Youth Orchestra is a group of about 66 members, 9 first violins, 13 second violins, 12 third violins, 4 violas, 6 cellos, 3 double basses, 4 flutes, 3 oboi, 2 clarinets, 2 horns, 3 trumpets, 3 trombones and 2 percussionists. [16]

In his speech at the first Concert of the Cyprus Youth Orchestra on July 5th, 1988 the Minister of Education Professor Andreas Philippou said: "We believe that with the Youth Orchestra we have created a "nursery" for the cultivation of music which will contribute to the manning as well as the further development of the National Chamber Orchestra and other relevant bodies..." The Minister of Education continued and stressed the beneficial effects of this activity and he said "... The enthusiasm with which our youth has responded to the Ministry's invitation and the zeal and keeness with which they have worked during the months of preparation for tonight, their first concert, make us certain that we are making a good start. It is for us, for you, for all of us to welcome with understanding and love this effort so that it may be strengthened, flower and bear fruit. The Ministry of Education is convinced that the functioning of both this orchestra and the Chamber Orchestra, satisfy the fundamental need for all round cultural development.." [17]

[16]. The Programme of the Concerts on the 5.6.1992 and 7.5.1992 in Limassol and Nicosia, respectively.

[17]. Cyprus to-day, A Quarterly Cultural and Informative Review of the Ministry of education, Vol:xxvi., No.3., Press and Information Office, Nicosia, 1988, pp.20-21.

In parallel with the function of the Cyprus Youth Orchestra the Summer Music School has been established. Since August 1989 every Summer the members of the orchestra meet for about ten days at the premises of summer camps of the Ministry of Education where they devote their time in practising specific programmes and for the improvement and learning of orchestral techniques. The talent and dedication of the young musicians of the Cyprus Youth Orchestra is another starting point for building up musical life in Cyprus.

PART TWO

1. THE PARAMETERS OF MUSIC EDUCATION AND THE HOLISTIC APPROACH TO MUSIC

2. MENTAL ACTIVITIES IN THE PROCESSING OF MUSICAL STIMULI THE RELATIONSHIP BETWEEN AUDIENCE - LISTENING AND COMPOSING

CHAPTER 3

THE PARAMETERS OF MUSIC EDUCATION

1. Music and Education

Music in the whole educational endeavour is an educational force with substantial value "worthy of pursuit for its own sake"[1] and it is now an integral part of the school curriculum. Although music today plays a significant role in our lives, because as Swanwick states, "... it is also, woven into the fabric of events in the wider community, frequently and necessarily taking place outside of conventional timetabled lessons in schools"[2] , music in education requires "greater organisational coherence."[3]

The organization of an effective programme, whether this is in music or in any other subject of the school curriculum, must be based on a knowledge of the reasons for teaching the subject. If teachers are sure why they are teaching a subject then they will be probably equally sure of how, when, and what they should be teaching. Therefore, a central question for teachers and all who are concerned with curriculum planning and development in music is: Why teach music?

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[1]. Regelski, Thomas A. (1981) Teaching General Music. Schirmer, New York, p.32.
[2] .Swanwick, Keith (1992) Music Education and the National Curriculum. Tufnell Press, London, p.8.
[3] . Ibid., p.7.

Any answer to this fundamental question depends on understanding the role of education as a whole. Although there are various views and numerous purposes of education, it seems that today in education, we are aiming at facilitating the growth of the child and equipping him with knowledge, skill, and attitudes that will help him to adapt to his/her environment.

Music has an important role to play in this aim of education, because "as all the arts" it provides "a unique form of knowledge[4]" to the development of children and "always seems to retain an indefinable magic and mystery which is beyond explanation."[5] For this reason it is regarded in the educational endeavour as an educational force with many educative values which "serve the education of all pupils in the classes and not only the abilities of the gifted few."[6]

For the purpose of this study I will not attempt to analyze further the significance of music in education, but I will try to examine the parameters of music education, which relate to the whole investigation.

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[4]. Reid, Louis Arnaud (1986) Ways of Understanding and Education, Heinemann, London, p.36.

[5]. Plummeridge, Charles (1991) Music Education in Theory and Practice, London, The Falmer Press, p.25.

[6]. Paynter, John & Aston, Peter (1970) Sound and Silence. London, Cambridge University Press, p.2.

2. The Activities in Music Education

Music in education is foremost a creative activity, which gives immense pleasure and enjoyment to the children, through a variety of experiences. But music in education is not only "pleasurable sensation" it is also knowledge and understanding. I agree with Charles Plummeridge when he says: "People engage in musical pursuits intelligently and according to the canons of the discipline."[7] The ways or kinds of understanding and the theory of knowledge are discussed by Louis Arnaud Reid in his book: Ways of Understanding and Education.[8] About the relationship and the distinction between knowledge and understanding, Professor Louis Arnaud Reid comments: "The distinction between knowledge and understanding is not difficult, then, to make at a superficial level. But the distinction at deeper levels, though it still remains as a purely conceptual notion, is very difficult to sustain clearly when one is thinking existentially of the mind at work as a whole."[9] We shall not work directly in the area of knowledge and understanding, but we will refer to it from the point of view of its relation to musical activities.

In the whole educational endeavour children desire active involvement and as Paynter and Aston point out: "Music is a rich means of expression and we must not

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[7]. Plummeridge, Charles, (1991) op.cit., p.40.

[8]. Reid, Louis Arnaud, (1986), op.cit.

[9] .Ibid., p.12.

deny our children the chance to use it."[10] This position as well as current musical practices in the classroom, suggest direct musical experiences of children with sound, which as Keith Swanwick comments: "This involves increasing attention to and the level of involvement with music in a conscious and deliberate way."[11] And if the role of education, as we have mentioned above, is to help the child to adapt to his environment adequately, then I agree with the view of Angela Rumbold, then a Minister of State for Education, when she stated, in a paper given to the National Association for Education in the Arts, that "Our aim will be to bring all pupils throughout their primary and secondary school years, into contact with the musician's fundamental activities ..."[12] And the activities which introduce the child to the essential methods of the discipline, bring him in contact with the musician's world and give him direct involvement are: composing, listening and performing. Under these headings we shall examine in brief the parameters of music education in terms of the following activities:

2.1 Composing

According to Sloboda, composing is "the creative process whereby new pieces of music are generated."[13] Swanwick specifies composing as the "act of making a

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[10] .Paynter, John and Aston, Peter (1970), op.cit., p.2.

[11] . Swanwick, Keith (1979) A Basis for Music Education. Slough, NFER, p.42.

[12] . Rumbold, Angela, The Arts and Education, Paper from the National Association for Education in the Arts, 1990, p.6.

[13]. Sloboda, John A. (1985) The Musical Mind. Oxford, Clarendon Press. p.102.

musical object by assembling sound materials in an expressive way."[14] Both views are dealing with the process and product of composer's work which is obviously creative. Although artistic creativity is always at the heart of music in schools the prime value of composition in music education as Swanwick states "...is not that we may produce more composers, but in the insight that may be gained by relating to music in this particular and very direct manner."[15]

2.2 Listening

This activity is a sine qua non in music education "rewarding in its own right, but also integral to all musical activity... listening is the basic musical activity and it rightly pervades all others."[16] In contrast to composing, which "involves making a score or some other communable record"[17], listening to music "is in many situations a passive affair,"[18] because as Sloboda adds, "...there may well be a lot of mental activity there is not necesarily any observable physical activity."[19] In an interesting comment, focusing on attentive listening, Paynter very rightly points out that:

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[14] . Swanwick, Keith (1979), op.cit., p.43.

[15] .Ibid., p.43.

[16] . Leonhard, Charles & House, Robert W., (1959) Foundations and Principles of Music Education, New York, McGraw-Hill, p.136.

[17] . Sloboda, John A., (1985) op.cit., p.151.

[18]. Ibid., p.151.

[19] . Ibid., p.151.

"Passive listening may be any observable social phenomenon but artistically it makes little sense. As music has now developed it is the artistry of music that offers us so much."[20]

2.3 Performing

Performance music in education should be examined under two dimensions. In its broadest dimension, in which as Sloboda states, "... performance covers the whole range of overt musical behaviour" and in a narrower dimension "... in which a performer, or a group of performers, self consciously enacts music for an audience."[21] Furthermore Sloboda, in an interesting statement about composing, performing, and language points out that "... the impulse to generate and perform music is as inherent as part of the human constitution as is the impulse to generate language."[22] This reasoning reinforces the approach towards composing and performing as central activities in classroom music. Especially for performing, and its implications in music education, Bennett Reimer writes:

"Performing, in the general music programme, is an essential but contributory mode of interraction with music. It is a powerful means, among others, for enhancing musical understanding and experience."[23]

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[20] .Paynter, John (1992) Sound and Structure. Cambridge: Cambridge University Press, p.12.

[21] .Sloboda, John (1985) op.cit., p.67.

[22] .Sloboda, John A. (1988) Generative Processes in Music. Oxford, New York: Oxford University Press. p.vi.

[23] . Reimer, Bennett (1989) A Philosophy of Music Education. New Jersey: Prentice-Hall Inc., p.185.

3. The Musical Activities and Their Inter-relationships

In seeking musical activities for the classroom and their inter-relationships, the writer has drawn on various other writings by music educators and on documents published by the Department of Education and Science in order to give the reader a broader view on this issue.

Firstly, Charles Leonhard and Robert W. House, in an interesting philosophical analysis of Music Education, focus on a music education programme "primarily as aesthetic education."[24] In such a programme, they regard performing, listening, and composing as a framework for musical activities, and suggest that:

> "Every child must be given the opportunity to develop his aesthetic potential to the highest possible level through expressive experience with music including vocal and instrumental performance, listening and composition appropriate to his developmental level." [25]

Leonhard and House also suggest that it is better for the teachers, when organising their programme, to think of the relations between the musical activities, as "Experiences must be planned in a natural series and the program must be divided into related forms of activity."[26]

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[24] . Leonhard, Charles & House, Robert. W. (1959) op.cit., p.116.

[25] . Ibid., pp. 116-117.

[26] . Ibid., p.270

Secondly, Keith Swanwick points out that the approach of music in schools is best related to the three central activities of composition, audition, and performance, CAP for short, as he calls them, which "give direct involvement" of students into musical experiences.[27] Apart from these central activities, Keith Swanwick refers to two other "peripheral" activities which have "supporting" and "enabling roles" for music in education, those of skill acquisition and literature studies. All five of these "parameters" of musical experience are called C(L)A(S)P for short and they represent C for Composition, (L) for Literature Studies, A for Audition, (S) for Skill acquisition and P for Performance. [28]

On this point Keith Swanwick draws to our attention that these activities are inter-related for classroom musical practices and he reinforces his view in the following manner:

> "Skills without performance is an arid affair, performance without skills is surely to be avoided, composition without the stimulation of models of other composers' works experienced in audition is unlikely; the auditor who is not also active in music in some other way is comparatively rare; knowledge of musical literature without a liking for musical audition or even some fluency in music-making seems an irrelevant occupation."[29]

Thirdly, Charles Plummeridge recognises that the combination of composing, listening, and performing activities "is a very good model" for school music.[30] Examining its implications for music teaching, he writes, "During the past few years there has emerged what might be called a new orthodoxy, namely, that all children

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[27] . Swanwick, Keith (1979) op.cit., p.43.

[28] . Ibid., p.45.

[29]. Ibid., p.46.

[30] . Plummeridge, Charles (1991) op.cit., p.47.

should experience music through performing, composing, and listening activities."[31] Plummeridge reinforces his point on these musical processes in the following manner:

> "Consequently, there is a strong case for saying that performing, composing and listening activities should form the core of the curriculum programmes, for it is through these three experiential modes that children's musical intelligence is released and nurtured."[32]

Furthermore, Plummeridge comments on the importance of the inter-relation of the triptych of composing, listening and performing in any proper music programme, which as he states "...includes responding to compositions and making evaluative judgements about them, and also involves creating and performing music, since these are the distinct and inter-related methods of the discipline".[33]

Fourthly, Janet . Mills expresses her views about the framework of the composing-listening-performing model in music education and she thinks in terms "of interdependence of these activities."[34] In her book, Music in the Primary School, she proposes that

> "In an integrated and coherent music education in which children compose,perform and listen, the boundaries between musical processes disappear. When children compose for instance, they

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[31]. Ibid., p.47

[32] . Ibid., p.63.

[33]. Ibid., pp. 48-49.

[34]. Mills, Janet (1991) Music in the Primary School, Cambridge: Cambridge University Press. p.87.

cannot help but learn as performers and listeners, as well as composers. That is the interdependence is about." [35]

Furthermore, the National Criteria for Music in the General Certificate for Secondary Education include the framework of performing-listening-composing activities "which should be integrated during the course."[36] Focusing on the syllabus context it is suggested that this should be closely defined and related to the three activities of listening, performing and composing. These are considered as "the primary activities of music and a coherent relationship between them is of paramount importance so that musical development can be experienced-based." [37]

Finally, in the context of music in the English National Curriculum we find again the fundamental activities of school music, which are performing-composing-appraising.[38] In this document the term appraising is tightly connected with listening and as Keith Swanwick rightly points out, "The term appraising is carefully defined and refers specifically to the audience-listener role, which I previously carefully called 'audition' to distinguish this particular way of listening from what might be called composing-listening or performing-listening. In the Report it is tied in with what is called 'relevant knowledge' of historical and cultural backgrounds. Now, of course,

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[35]. Ibid., p.88.

[36]. Department of Education and Science (1985) General Certificate of Secondary Education: The National Criteria: Music, London, HMSO, p.1.

[37]. Ibid., p.3.

[38]. Department of Education and Science (1991) National Curriculum, Music for ages 5-14, London, HMSO, p.14.

appraisal also takes place when people are composing and performing and might be best developed through these activities."[39] And elsewhere in his writings Keith Swanwick, very rightly, is focusing on the relationships of the musical activities and suggests that "It is better to think of relationships between different musical activities rather than of 'balance' which suggests proportions rather than integration."[40]

The Report on Music in the English National Curriculum gives many suggestions for musical activities and points out that these activities "of performing, composing and appraising (through active listening) should be interwoven, with the learning derived from each serving to reinforce and develop learning and skill in the others."[41] But not made explicit in the attainment targets of the document, is the point that these activities should be inter-related, something which suggests integration and helps children to explore the power and beauty of music.

4. Aesthetic Responsiveness to Music and Arts in Education

Music education today involves children in the above mentioned musical activities and helps them to acquire musical experience which, as John Paynter points out, "is concerned with adventures of feeling, imagination and invention. These features link

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[39] . Swanwick, Keith (1992), op.cit., p.8.

[40] . Swanwick, Keith (1992) Guidelines on Music in the English National Curriculum, UK Council for Music Education and Training, p.4. (unpublished paper).

[41]. DES (1991), op.cit., p.15.

composing, performing and listening, and should presumably be given some prominence in music education."[42] We can assume that his point supports our view that the emphasis of music and music education should be based on the aesthetic responsiveness, which "initiates pupils into a form of life"[43] through the activities of composing, listening and performing. And as Plummeridge proposes "...this will enable pupils to gain a progressive understanding of music as a realm of meaning. And it is from within this realm that people make aesthetic judgements and come to value music as an art form."[44] Swanwick reinforces this point, of the role of the musical activities in the aesthetic responsiveness to music in the following manner

> "...musical objects are the focus of musical experience and therefore of music education; this experience is only acquired through the activities of composition, audition and performance; each of these three areas involves a relationship with music that is distinctive in emphasis; audition is prime among them; musical experience refers to, and at its most powerful, reformulates the ways in which we feel life." [45]

This gives a new awareness of the importance of music in education and shows the significance of the musical activities in introducing "pupils to the full range of human beings."[46] But for music and the other arts to be accepted as part of the "core curriculum", the "myth" that there is a difference between the so called "academic"

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[42]. Paynter, John (1992), op.cit., p.13.

[43] . Plummeridge, Charles (1991), op.cit., p.63.

[44] . Ibid., p.63.

[45]. Swanwick, Keith, (1979), op.cit., p.54.

[46] . Plummeridge, Charles (1991) p.40.

subjects and the world of arts should be "abandoned". This is the point Professor David Aspin is making when he says

> "These myths I believe should be abandoned or suspended; the view that there subsists a difference between the "factual" world of the sciences and the 'values' world of the arts- between, in other words facts and values; between the world of intellect and that of feeling - between reason and emotion; between the world of hard work and disciplined learning on the one hand and that of spontaneity and creativity on the other; between the physical world and the spiritual world - between 'mind' and 'body,' and lastly between conception and articulation - between thought and 'language'. The collapsing or at any rate the suspension of all these dualisms help us to approach the question giving some account of the objectivity of aesthetic judgments and showing how children's increasing ability and confidence in making them can be monitored and evaluated..."[47]

5. The Holistic Approach in Education

Therefore if the arts should have a priority in curriculum planning and development, their aims should be related to the aims of education as a whole as we mentioned at the beginning of this chapter. Professor Louis Arnaud Reid proposes the following as Aims of Education "There seem to be three main, but overlapping, emphases in talk of the aims of education. One emphasis is instrumentalist,.. that the main business of school education is to prepare children to be functionaries in whatever sort of adult society in wait for them. Another view focuses more on the importance of developing particular qualities in young people growing up - qualities physical, mental, affective and emotional, social, moral... with a particular stress on one another. A third would claim to be more comprehensive: the main aim of education

[47]. Aspin, David, (1990) The problem of Aesthetic Education, Paper from the National Association for Education in the Arts, The Arts in Education, London,pp.33-34.

should be the "development of the whole person."[48] Within this context of education the various subjects have their modes of expression.

6. Language and Music

Now, if we examine the relation of the modes of expression between music, which may be considered a type of language,[49] and ordinary language we find that there are differences. Harold Osborne supports this stating that:

> "Attempts to press the metaphors of language too closely without giving due attention to basic structural differences between language and the arts have led to dire results, particularly in the theory of music.
>
> Languages are composed of units of expression, technically called elements of discourse, which are grouped into patterns of sentences, etc., according to rules of syntax. Communication is achieved by selecting a particular pattern of elements among the possible patterns within the constraints imposed by the rules of the language. The complex patterned structure so formed functions as a vehicle carrying a message. This process is made possible because individual words have referential (including grammatical, associative and emotional) meanings, which often acquire added sharpness and precision when the words are combined into linguistic structures. These are the building blocks of language. But music and the visual arts have no such building blocks. Their structure is organized on a different principle. They are organized as multi-level structures, each level consisting of subsystems which are wholes with regard to their parts and parts within the larger wholes. And each part is an integrated whole whose properties cannot be reduced to those of its parts.[50]

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[48]. Reid, Louis Arnaud (1986) op. cit., pp. 109-110.

[49]. Osborne, Harold, (1984) The Language Metaphor in Art, The Journal of Aesthetic Education, Vol.18, No.1. University of Illinois Press, p.9.

[50]. Osborne, Harold (1984) op.cit., p.17.

This statement by Osborne reveals the nature of music as an artistic entity and, as Susanne Langer states,

> "If music has any significance, it is semantic not symptomatic... Music is not the cause or the cure of feelings, but their logical expression; though even in this capacity it has its special ways of functioning, that make it incommensurable with language, and even with presentational symbols like images, gestures and rites."[51]

In an interesting analysis of music functioning emotionally, Osborne states

> "The emotional character of music and the other arts is 'emergent' at every stage and every level, not built up piece-meal from emotional 'units'. Emotional character first emerges with the melody and the rhythmic phrase. Small agglomerations of sound have not emotional identity of their own but take their emotional colour from the contextual wholes into which they merge as the structure unfolds. There are no building bricks in the arts as words are the building bricks of language, and the 'elements' from which the various arts are patterned have no emotional character in isolation."[52]

7. The Holistic Approach to Music Education

It can be argued that music in the classroom should be seen holistically as an education of children's musical development and linked with a variety of approaches functioning in relation to three inter-related activities, that of composing, audition (listening) and performing. This enables us to see music education and musical activities functioning as a whole, and to recognise the inter-dependence of the musical activities in achieving the aims and objectives of music education.

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[51]. Langer, Susanne K., (1957) Philosophy in a New Key, 3rd.ed. Cambridge, Mass. Harvard University Press., p.218.

[52]. Osborne, Harold (1984) op.cit., pp.17-18.

The arguments and various views expressed in this chapter enable us in understanding the roles of education and music as a whole and their inter-dependence. Also they define an approach to music education based on three inter-related musical activities, that of composing, audition (listening) and performing. This process is essential within the complex structure of music education, in which the three inter-related activities should be used as an integrated vehicle for helping children experience the power and beauty of music. This relates absolutely with the point Peter Abbs is making when he says

> "In this structural pattern, dialectical and complementary, deeply implicating the conscious and unconscious, the body and the mind (the psychesoma), culture, community and history, lies the best paradigm for both the teaching of the arts and the latent potentialities of our complex natures."[53]

8. Conclusions

The most appropriate way of finishing this chapter is to quote Professor Louis Arnaud Reid, who emphasizes the holistic approach to knowledge and understanding which has been one of the main messages of this chapter.

> "It is a joy of actively intuitive contemplation of sometimes great complexities as unified wholes. The 'beauty' of these things is not something hedonistically sought after (any more than it is in the creation of art). Rather it is the reward of absorbed attention to anything worth attending to. The teacher who stimulates and encourages this engrossed engagement of pupils in whatever they are studying, is teaching educatively and the outcome is educative learning. The satisfaction it brings is the reward of the holistic

[53]. Abbs, Peter, (1989) A is for Aestheic: Essays on Creative and Aesthetic Education, Falmer Press, p.24.

approach to knowledge and understanding of many things of many kinds..."[54]

With this framework in mind, it is quite probable that the inter-relation of the musical activities can help children to develop their musicality. For this reason we investigate in this study the extent to which audience-listening may influence composing. It is assumed, that the experience of listening might develop one's ability in composing. But this parameter has not been investigated. So, by proposing to use the Swanwick-Tillman developmental spiral we shall conduct research:

1. To investigate if the findings of the Swanwick-Tillman musical developmental model mapped out in 1986[55] could be repeated in another cultural setting, namely Cyprus.

If the writer finds this a reliable indicator to assess children's compositions, then he will conduct further research

2. To investigate the extent to which audience-listening might influence composing.

Before attempting this we need to examine the relationship between audience-listening and composing. How these two activities are related is explained in the next

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[54]. Reid, Louis Arnaud, (1986) op. cit., p.141.

[55]. Swanwick, Keith & Tillman, June, (1986) "The Sequence of Musical Development". British Journal of Music Education. Vol.3. No.3. Cambridge Univeristy Press, pp.305-339.

chapter which deals with mental activities in the processing of musical stimuli and proposes a model which shows the relationship between audience-listening and composing.

CHAPTER 4

MENTAL ACTIVITIES IN THE PROCESSING OF MUSICAL STIMULI

THE RELATIONSHIP BETWEEN AUDIENCE-LISTENING

AND COMPOSING

1. The Psychological Background

The relationship between the activities of audience-listening and composing is perhaps one of the more difficult areas to be researched. On the one hand we have the activity of ".... responsive listening[1]" of an auditor and on the other hand we have "... the act of making a musical object by assembling sound materials in an expressive way."[2] But how are these two activities related as they pertain to the field of music education? To shed light on this issue and find answers we need to examine the mental activities involved in the processing of musical stimuli. The findings and theories of developmental psychology can perhaps best explain the mental processes of children involved in experiencing music in a formal system of music education.

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[1] Swanwick, Keith (1979), A Basis for Music Education, Windsor: NFER Nelson, p.45.

[2] Ibid., p.43

Many important developmental psychologists, although using various terms in their writing, have referred to four similar broad units of intellectual activity through which children pass in order to attain a particular level of intellectual growth and development. I shall focus my theory from the work of Piaget, who is regarded as the most influential theorist in developmental psychology and epistemology. He distinguished the well - known following four successive important stages of human development which are based on actions and operations. His first stage (0-18 months) is the period of sensori-motor intelligence, which is based on the actions performed by the child in adapting to the environment. Young children imitate what they see and hear according to their capacities. In Piagetian theory a sequence of coordinated actions or operations is called a schema, in the plural, shemas or schemata. Piaget uses the word schema for "... the infant's perceptual motor coordinations, for example, searching for objects or pulling a string. At each age a child has an existing sets of actions and operations".[3] According to Pyle, who refers to the work of many important psychologists, "A schema is the most basic unit, and refers to either a sequence of physical or mental action, or to a mental representation of an event".[4] Schemas or schemata are the broad units of intellectual development, which is based on their elaboration. Although in Piaget's work there is a distinction between schemes and schemata, wherein these terms do not indicate precisely the same meanings, in this thesis we shall use the terms scheme or schemes interchangeably with schema or schemas and schemata as usual in psychological theory.

[3] Mussen, P. H., et al. (1974) Child Development and Personality, New York: Harper & Row, p.40.
[4] Pyle, David, W. (1979) Intelligence, An introduction, London: Routledge & Kegan Paul, p.7.

Piaget uses the term "schemes" for the "...more concrete kinds of cognitive structures that are formed consciously"[5] and refers to "schemas" as "...co-ordinated systems of movements and perceptions, which constitute any elementary behaviour capable of being repeated and applied to new situations...".[6] Furthermore, Piaget and Inhelder in their book "Memory and Intelligence" define a distinction between shemes and schemata according to the development of the memory. They refer to a mnemonic scheme as

> "...simplification of a memory or of a memory - drawing; for example, the reduction of peaks on a mountain range... A scheme is a law governing the behaviour (mental or graphic) of the image as such, and develops very slightly with age, its main advantage at all levels being that it leads to mnemonic economies, and hence to useful or distrorting mnemonic procedures. A schema, by contrast, is an instrument of generalization, and while it, too, can be adequate or distortive, it depends on the intellectual level of the subject."[7]

According to Piaget "... the essential mechanism of sensorimotor intelligence consists of a schematizing assimilation, and it is from this that the subsequent operations of representative thought proceed".[8]

The second stage, a preoperational stage, is the period which begins with speech and lasts up to seven or eight years and is the period of representational imitation. During this transitional period the basic schemata are developing into images and symbols. This is a period of pre-conceptual thinking, which gradually moves to intuitive

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[5] Reber, Arthur S., (1985) Dictionary of Psychology, London, Penguin Book's, p.665.
[6] Piaget, Jean (1962) Play, Dreams and Imitation in Childhood, London, Routledge & Kegan Paul. p.274.
[7] Piaget, Jean and Inhelder, Barbel (1973) Memory and Itelligence, London: Routledge & Kegan Paul, p.382.

[8] Piaget, Jean (1974) The Child and Reality, London:Frederic Muller Ltd, p.82

thinking. According to Bandura at this stage "...schemata are coordinated internally through imaginal representation to form new patterns of modelled behavior without requiring overt provisional trial of actions".[9]

After this period a child can move into the third stage of intellectual development, the stage of concrete operations (7-12years). During this period, according to Piaget "..... certain operations are completed and organized in logically reversible structures."[10] In other words they restore their original state by reversing their order. In the stage of concrete operations the child believes "..... that length, mass, weight and number remain constant despite superficial modification in their external appearance"[11] , (operation of conservation). Also at this stage the child is able to produce a mental image of a series of actions, (mental representation) to understand rational terms between two or more objects, to reason simultaneously about the whole and its parts and to order objects according to a dimension of quantity, such as weight or size (serialization). In this stage of concrete operations ".... the child has learned some central rules to aid his adaptation to his environment"[12] but the

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[9] Bandura, Albert (1977) Social Learning Theory, Englewood Cliffs: Prentice-Hall, p. 33.
[10].Piaget, Jean (1974) op.,cit., p.79.
[11] Mussen, Paul, H., et al. (1956) Child Development and Personality, Harper & Row, Publishers, New York, p.312.
[12] Piaget, Jean (1974) op., cit., p.79.

operations are "..... limited to the field of manipulation of the objects"[13] which is referred by Piaget as "operatory praxis"[14]

Finally at about the age of twelve years, the child moves to the fourth stage, which is the period of formal operations. During this period there is the ".....tendency to generate and explore systematically all possible solution hypotheses and then to check each carefully for its probable validity....."[15] . At this stage formal thought is orientated towards problem solving and is rational and systematic. Piaget believes that at this stage "..... the propositional or hypothetico-deductive operations are constituted which can function beyond any object manipulation and no longer concern praxis"[16] , which is the characteristic of the concrete operations stage. Moreover, during this period there is a tendency in the child to function beyond the present towards the future, the hypothetical and the remote.

None of the above mentioned ages are fixed nor is the speed of development invariable, since every child is developing at his own pace, but everyone has to pass, according to Piaget, through the above prescribed stages.

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[13]. Ibid., p.79

[14]. Ibid., p.79.

[15] . Mussen, Paul, H., et. al. (1956) op., cit., p.313.

[16] Piaget, Jean (1974) op., cit., p.79.

Piaget in his theory sees the development of intelligence as the way an individual adapts to his environment, and explains this development in terms of assimilation and accommodation.

Although assimilation is a term which entails broad connotations its basic meaning is "...to take in, to absorb or incorporate as one's own"[17] . Specifically, in Piaget's theory assimilation "...is the application of a general schema to a particular person, object or event"[18] , in other words, the incorporation of new objects or experiences into existing schemata. The accompanying Piagetian term, accommodation, generally might be considered as "any movement or adjustment either physical or psychological which is made in preparation for incoming stimuli."[19] The specific use in Piaget's theory, of accommodation is "...the modification of internal schemes to fit a changing cognizance of reality."[20] In other words the modifications of schema to solve new problems which arise from new experiences. Piaget refers to accommodation as the ".... differentiation of response to the action of the objects on the schemes, synchronized with assimilation of the objects to the schemes."[21] Assimilation and

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[17]. Reber, Arthur, S. (1985) op., cit., p. 56.

[18]. Ibid., p.56

[19] Ibid., p.5

[20].Ibid., p.5

[21].Piaget, Jean (1974) op., cit., p.82.

accommodation are the parts of a process of adaptation, where in order to adapt to the demands of its environment the child must accommodate to the demands of the objects. According to Baldwin, who refers to Piaget's theory ".... assimilation describes the capacity of the organism to handle new situations and new problems with its present stock of mechanisms; accommodation describes the process of change through which the organism becomes able to manage situations that are first too difficult for it"[22].

Piaget refers to assimilation and accommodation as complementary processes, which are interrelated in a way, that as Baldwin refers, "..... the organism must to some degree assimilate a new situation before it can accommodate to it".[23] This is the process which brings about development. In this way new activities or tasks and new problems which are not yet completely assimilable, evoke schemas which motivate the use of the particular schema to master completely the situation or the problem. According to Piaget and Inhelder a schema is an instrument of assimilation which intervenes in all problems of intelligence or even of sensori-motor and practical adaptation. As they further state:

> "every schema must accommodate itself to a given situation, and its application therefore involves balancing assimilation with accommodation. Now, the latter, when it predominates and becomes an end in itself, leads to imitation i.e. to the more or less pure

[22] Baldwin, Alfred, L. (1967) Theories of Child Development, New York: John Wiley & Sons, p. 176.

[23] Ibid., p.176.

> accommodation to an object or a process considered as the external model of an action, and imitation itself, once it has been internalized, becomes the source of the image."[24]

Now as far as music is concerned, all the above mentioned characteristics seem to come into a focus in that assimilable tasks in audience-listening activity, evoke schemata and motivate the use of these schemata until the activity is mastered. It is easy to see that the child assimilates to some degree the sound schemata before it can accommodate to them and for them to become available as tools for new situations and new activities. In this way the audience-listening process is simply an initial bias towards assimilation, whereas composing has an initial bias towards accommodation. This is happening because the child should assimilate to some degree schemata of sound before it can modify them, through the accommodation process and use them as tools for composing.

As Piaget considers the psychological processes involved in the development of children, he distinguishes four factors which affect development. 1, heredity and internal maturation; 2,the physical experience, the actions of objects; 3, social transmission, the educative factor in the large sense, and 4, equilibrium, which is considered the fundamental factor of the development[25].

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[24] Piaget, Jean and Inhelder, Barbel (1973) op.,cit., p.403
[25] Piaget, Jean (1974) op.cit., pp. 27, 28, 29.

According to Piaget, equilibrium is "... the compensation by reaction of the child to the outer disturbances, a compensation which leads to the operatory reversibility at the end of this development".[26] In Piaget's theory ".... equilibrium is defined by reversibility[27] " a feature which links objects ".... one with another in such a way that movement in either direction is possible, instead of distorting them by reducing them to the activity of the subject."[28] In the field of intellectual operations reversibility is characterized by Piaget as ".....the possibility of retrieving an earlier state of the data, which is not inconsistent with its present state (assimilation) and is as real or as realisable as that present state (accommodation)."[29] This is, in fact, reversibility which Piaget defines as "..... the most apparent characteristic of the act of intelligence which is capable of detours and returns."[30] ".... It is this mobile, reversible equilibrium that ensures the conservation of concepts and judgements, and that governs both the correspondence of operations between individuals (social exchange of thought) and the interior conceptual system of the individual himself."[31]

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[26]. Ibid., p.29.

[27]. Piaget, Jean (1974) op. cit., pp.60-61.

[28] Piaget, Jean (1962) op.cit., p.240.

[29] Ibid., p.240.

[30] Piaget, Jean (1974), p.61.

[31] Piaget, Jean (1962) op.cit., p.240.

These statements can be associated with the field of music in which the same processes are applied in the conservation of musical sounds and patterns, and govern their correspondence in the fields of intellectual operations, which can function in audience-listening, composing and performing activities.

During the sensory-motor, preoperational and concrete operational stages, cognitive states are quite temporary, but at the formal operational stage they may be rather stable and, as Piaget points out, they "reveal the progressive reversibility of intelligence and thus appear more and more removed from known organic structures".[32]

The functional unity of the development leads from sensory-motor to operational intelligence through progressive equilibrium which results in the reversibility. From this it is clear that during the stages of development, reversibility is growing at a regular rate and increases level by level. This mechanism is more stable and of a more extended form in the privileged field of intellectual operations and develops in the child from the age of seven to the age of fifteen through operational processes that ensure the progressive reversibility of intelligence.

If, according to Piaget's theory "....the primacy of accommodation characterises imitation and the image, and the primacy of assimilation explains play and the

[32]. Ibid., p.169.

"unconscious" symbol",[33] then by considering imitation of the child as a "...learning process like any other"[34] it may be said that the development of imitation raises all the problems involved in sensory-motor and mental development. Imitation is thus, according to Piaget's theory, "...closely connected with the act of intelligence, of which it is one differentiated aspect, a temporarily detached part."[35] The child learns to imitate, and follows various stages, closely connected with the six stages of the development of sensory-motor intelligence, which enable him gradually to develop his ability and technique as "... a continuation of accommodation "[36] whilst play " ... is essentially assimilation, or the primacy of assimilation over accommodation."[37]

In the development of imitation, the first period, which is characterised as a preparatory stage, constitutes a kind of functional repetition of reflexive acts which are mainly physical. By the end of this period, at about two years of age, deferred imitation makes its appearance, which means that the model itself does not need to be present. Therefore deferred imitation is not based "on the actual action", and furthermore the child becomes capable "of imitating internally a series of models in

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[33]. Piaget, Jean (1962) op.,cit., p.4.

[34]. Ibid., p.5

[35]. Ibid., p.5.

[36]. Ibid., p.87.

[37]. Ibid., p.87.

the form of images or suggestions of actions. Imitation thus begins to reach the level of representation."[38]

From two to seven years of age imitation is properly representative and we can distinguish it from sensory-motor imitation. The characteristic of imitation in this period is that the representation of the model in a mental image always precedes its reproduction.[39] In this age group there is little attempt to imitate the details of a model, and the imitation is of a general character. At about seven or eight years of age imitation becomes deliberate and takes its place in the whole construction of intelligence. This characterises the concrete operational stage. At this latter stage imitation progresses in three ways:

(1) there is imitation in detail based on analysis and reconstitution of the model, (2) there is consciousness of imitation and the clear dissociation between external elements and those belonging to the child himself, (3) there is discrimination, since imitation is used as an aid to the fulfilment of the needs inherent in the child's activity. At this level imitation is controlled by intelligence as a whole, and can be called reflective.

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[38]. Piaget, Jean (1962) op.,cit., p.62

[39]. Ibid., p. 74.

As a result of this process it is clear that at all levels of the adult and the child, there is imitation which, according to Piaget, "... is the continuation of the accommodation of the schemas of sensory-motor intelligence, from perception and habits to interiorised co-ordinations".[40] We can thus see that sensory-motor intelligence essentially controls imitation and continues to play an important role throughout life. Even when conceptual intelligence makes its appearance, the sensory-motor schemas for perceptive activities and motor-habits are continuing, but at the same time are gradually "integrated to some extent in conceptual and operational schemas".[41]

It must be added that the experiments of Piaget show that imitation is linked with representation and is, as such, a product of "...interiorised imitation and therefore a continuation of accommodation."[42] In Piaget's theory, representation is defined as "... union of a "signifier" that allows of recall, with a "signified" supplied by thought",[43] and is characterised by the fact that it "... evokes what lies outside the immediate perceptual and active field."[44] Thus we can see how, at the various representative levels, interiorised imitation leads to the formation of images. This becomes possible

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[40]. Ibid., p.85.

[41]. Ibid., p.77.

[42]. Ibid., p.5

[43]. Ibid., p. 273

[44]. Ibid., p. 273

also at the highest levels of representation, where we can view the image as interiorised imitation "... resulting from the ever present sensory-motor schemas".[45]

It is, however, essential to emphasise that in order to understand the process which takes place when we form a mental image of a visual scene perceived earlier, we have to analyze, compare and transform using an activity "... which starts in perceptive regulation and comparison, but is integrated in a system of concepts enabling us to give meanings to the elements and relationships thus analyzed."[46] Now the perceptive activity produces the image, which is a kind of schema of the perceived object, and which is integrated immediately in conceptual intelligence as a "signifier" . In this complex situation we must make clear that although imitation is always based on intelligence, it is not in any way identical with it because imitation is the continuation of accommodation while the act of intelligence is the equilibrium between assimilation and accommodation.

The problem of imitation is closely linked with that of representation which is an interiorised imitation leading to the formation of mental or memory images (signifiers) produced by a system of concepts or mental schemata (signified).

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[45]. Ibid., p.77

[46]. Piaget, Jean (1962) op.cit., p. 77

According to Piaget ".... the concept is an abstract schema and the image a concrete symbol"[47] which can accompany all thought. In his work, Piaget shows that the "signifier", which is common to all representation, "... is the product of an accommodation that is continued as imitation, and hence as images or interiorised imitations"[48] whilst the "signified" "... is the product of assimilation, which, by integrating the object in earlier schemas, thereby provides it with a meaning".[49] Representation is a double interplay of assimilations and accommodations which tend towards equilibrium.

The American psychologist Bruner defines representation as the process through which the child "... gets free of present stimuli and conserves past experience in a model, and the rules that govern storage and retrieval of information from this model".[50] When the level of representation has been reached there appear various gradations owing their existence to the greater number of combinations between assimilation and accommodation, which, as Piaget states ".... are no longer only

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[47] Piaget, Jean (1962 op.cit., p.67.

[48].Ibid., p.273.

[49]. Ibid., p.273.

[50]. Bruner, Jerome, S., (1966) Toward a Theory of Instruction, Cambridge, Mass: Harvard University Press , p.10

actual, as on the sensory-motor plane, but both actual (accommodation proper) and past (images)"[51].

These processes gradually create the formation of an abstract or symbolic internal representation of the music, a central experience, which is closely connected both with cognitive and affective stages of musical development. Although music is a pleasurable experience it also conveys meaning by "... identifying, clarifying and structuring feeling".[52] Such meaningful and feelingful experiences are surely enhanced through educative efforts which "tune in" the children appropriately to know music by developing the cognitive and affective areas of experience.

According to Sloboda "... The way in which people represent music to themselves determines how well they can remember and perform it. Composition and improvisation require the generation of such representations, and perception involves the listener constructing them."[53] Although these representations and the processes which create them are not observable we can trace them in the ways people compose, listen to, perform, memorize and react to music. These activities are skilled behaviours which are learned, so it is the role of music education to put together a

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[51]. Piaget, Jean (1962) op.cit., p.213.

[52]. Swanwick, Keith (1979) op.cit., p.39.

[53]. Sloboda, John, A. (1985) The Musical Mind: The Cognitive Psychology of Music, Oxford: Oxfords University Press, p.3.

comprehensive programme which will further musical development for a whole range of children, by involving them in the "real-life behaviour of musicians"[54] including audience-listening, performing and composing activities appropriate to each stage of children's development. By using this approach some children may be more susceptible to coming to musical understanding through performing (output skill) and composing (higher cognitive functioning skill) while others may be drawn to music primarily as audience - listeners (input skill).

2.Auditory Memory and Auditory Imagery

As we consider the psychological processes involved in musical development, we must recognise also the central importance of auditory memory. According to Piaget and Inhelder, memory in the wider sense, " ....is the conservation of everything that has been acquired in the past, including the various systems of schemata (from habits to operations) but excluding hereditary schemata, reflexes, etc., not due to learning..."[55] Seen in this light, i.e. as the organisation and reconstruction of the past, memory makes use of the pre-operational and operational schemata of the intelligence. In fact Piaget and Inhelder indicate that the development of the memory is based "... on the structuring activities of the intelligence, though regulated by a special mechanism,

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[54]. Ibid., p.9

[55]. Piaget, Jean and Inhelder, Barbel (1973)op.,cit., pp.387-388.

namely, the structuring of the past or of past experiences."[56] Now, the unity of the various forms of memory resembles that of the intelligence "...both in respect of the hierarchical levels of development and also in respect of the relationships between the figurative and the operative aspects."[57] The figurative aspects are the perceptions, imitations and images, and the operative aspects are the schemata.

As we know, intelligence manifests itself in four successive stages: sensori-motor, representative culminating in concrete operations and, finally, formal operations. The memory, also, and its mnemonic levels of recognition, reconstruction and recall, can also, according to Piaget and Inhelder, be seen to fit into the same framework and, as they state,

> "... early recognitions correspond to the sensori-motor; reconstructions mark the transition from the sensori-motor to the representative stage, while recall corresponds to the stage of representative, preoperational or operational forms of intelligence."[58]

How the transition from one stage to the other is effected (recognition - reconstruction- recall) is a difficult problem to answer and is perhaps best related to that of representation in which, according to Bruner's theory, the enactive, iconic,

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[56]. Ibid., p. 380

[57]. Ibid., p. 405

[58] .Ibid., p. 405.

symbolic codes happen "... as if some sort of image formation or schema formation... comes rather automatically as an accompaniment of response stabilization. But how the nervous system converts a sequence of responses into an image or schema is simply not understood."[59]

As far as music is concerned, its basic element is sound in time, so it is impossible for a person to behold a piece of music in the instant. Memory, therefore, plays a distinct role in music compared to any other of the fine arts. Sounds are gathered in memory from sensori-motor experiences as well as affective operations. Their representation, depending upon operations and auditory organisation, transforms sound stimuli into the form of echoic codes, a term characterizing auditory images. The echoic codes (auditory images) are different from iconic codes (visual images) and symbolic codes (language). According to Horning Thomas, echoic codes and iconic codes are images which "... are the forms of internal representations generated by sensory experience and bear a real correspondence to the stimuli which generated them. They should be distinguished from symbolic codes which are representations generated arbitrarily and bear no real correspondence to that which they represent."[60] These echoic codes can be organised into units through creativity, especially composing, an activity based

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[59] .Bruner, Jerome, S., (1966) op.cit., p.14.
[60]. Horning, Thomas, Martin, (1982) The Development of a Model of the Psychological Processes which translate Musical Stimuli into Affective Experience, Unpublished Ph.D. Thesis, Case Western Reserve University, U.S.A. p.42

upon relationships between images which might have been previously unrelated. Towards the development of such relationships, auditory memory, which can be considered as a storage system, plays an important role. This system facilitates the development of abilities which can take people beyond the information they encounter on a single occasion. Auditory memory, makes judgments possible, finds relationships between auditory images, and makes reconstructions during the processes of audience-listening and composing.

We shall not speak more about memory because it is not the purpose of this study, but in brief, as Piaget and Inhelder point out, there is a fundamental unity of memory and intelligence, and their common nature is evident "...not only because both pass through the same stages but also because the evolution of the mnemonic "code" is a direct function of the construction of operational schemata".[61] The mnemonic "code" is a term relating to memory and applies to " ... a set of rules or operations that transforms items"[62] in order to commit them to memory or to improve the memory.

To return to the image it is important to point out that this is necessary in musical thought, especially in creative work. This necessity is marked by Seashore who states

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[61]. Piaget, Jean and Inhelder, Barbel (1973) op., cit., p.409.

[62]. Reber, Arthus S., (1985) op., cit., p.128.

"... take out the image from the musical mind and you take out its very essence."[63] An image in the auditory system is called an auditory image, which is a mental representation of specific musical actions or events, for example, the formation of an auditory image of a well known popular song or a well known tune. The process of imaging music, or often the actual images themselves are called auditory imagery because they are images formed in the auditory system. Although the terms auditory image and auditory imagery are most complex and there is also a subtle overlap between image and imagination which is marked by Reber who states " ... to image something is not, strictly speaking, the same mental act as to imagine something,"[64] we must admit that part of the auditory memory is auditory imagery, another great asset to musical development. The presence of auditory imagery allows a person to relive, i.e. to remember, music through productive or reproductive imagination. As we have mentioned above an important psychologist and epistemologist who lays great emphasis on the nature of auditory imagery is Carl E. Seashore. Although Seashore's use of terms is not the same as Piaget's his writings support the underlying importance of auditory imagery.

Seashore points out that auditory imagery is an important characteristic of musical life and essential because "...it is in terms of this that we relive music in the nature of

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[63] .Seashore, Carl, E. (1967) op.,cit., p.6.

[64]. Reber, Arthus S., (1985) op.cit., p.344.

sounds which we have once heard and express new music in creative imagination"[65] In other words auditory imagery ".... is the outstanding mark of musical mind at the representation level"[66] which is the capacity ".... to hear music in recall, in creative work, and to supplement the actual physical sounds in musical hearing".[67]

From the above it is clear that auditory imagery is a phenomenon a capacity which brings

> "... tonal material into the present; it colours and greatly enriches the actual hearing of musical sounds; it largely determines the character and realism of the emotional experience; it is familiarity with these images which makes the cognitive memory for music realistic."[68]

Seen from this angle imaging music is a mental process based on active transformation of musical stimuli into meaning by matching them with previously "...known musical images"[69] stored away in the memory. These points make it quite possible to recognize the significance and power of auditory imagery, which must be at the service of an individual for personal musical achievements.

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[65]. Ibid., p.339.

[66]. Ibid., p.5.

[67]. Ibid., p.161.

[68]. Ibid., p.6

[69]. Hindemith, Paul (1969) A Composer's World, Harvard University Press, U.S.A. p.20.

Although in the capacities of auditory memory and auditory imagery one can trace transmission of traits through heredity with differences between individuals, their power can be developed to a marked degree by careful training, so that they are both serviceable for musical achievements. Their development is possible by training as well as by rehearsal. Both these are important elements for their improvement. According to Bandura, rehearsal " .... serves as an important memory aid. When people mentally rehearse or actually perform modelled response patterns, they are less likely to forget them than if they neither think about them nor practice what they have seen."[70] Through mental rehearsal people are less likely to forget patterns of sounds than if they have neither thought about them nor internally reviewed them in sequence. Bandura stresses the role of mental rehearsal and he states that it ".... increases proficiency and retention."[71] In such a case, the attentive and imaginative thinking essential to auditory memory and auditory imagery offer the opportunity of gaining further insights into music. This can be facilitated in music education by developing skills, through activities such as audience-listening, performing and composing and by integrating them to produce new patterns in sound.

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[70]. Bandura, Albert (1977) op.cit., p.26.

[71]. Ibid., pp.26-27.

3. A Model of Audience Listening and Composing

The above mentioned theories can provide a basis for thinking in the music field in terms of the relationship of audience-listening and composing.

Music, being a system of patterns in sound, can supply motivations for audience-listening and composing. As they apply to our model of Mental Activities in the Processing of Musical Stimuli, the resemblance of signifiers provided by imitative images is a continuation of accommodation most apparent in the process of composing, whilst signified, provided by objects is a continuation of assimilation most apparent in listening.

Piaget's theory is similar and he differentiates a signifier from a signified and thus allowing himself the possibility of using the one to call forth or refer to the other, when he defines the ability to imitate and represent. This ability will be gradually gained in music if the child is supported by a system of a wide variety of usable sets of sound (signified) for audience-listening which will be at the disposal of the individual and be assimilated into the memory for the musical experiences of their future. Then the watchful eye of consciousness and the skilful hands of creativity can organise and assemble these echoic codes (auditory images) into units, a process which might well

affect composing and might also be considered as the ability to imitate and to represent.

According to Piaget the "signifier" which is common to all representation "...is the product of an accommodation which is continued as imitation"[72], and in our model is biased towards composition. The "signified" "... is the product of assimilation, which, by integrating the object in earlier schema, thereby provides it with a meaning"[73] and in our model is biased towards audience listening. Before completing our model we must clarify the link between audience-listening and composing and attention, selection and perception processes, which are, in turn, powerful devices in music education and controlling factors in the musical growth of children.

Attention is a powerful device in that it controls the thought process, and focuses it on certain musical events to the exclusion of others. As Sloboda puts it, "This mechanism operates like a "filter" which lets through only material which is defined by some distinguishing sensory feature (like pitch, or ear of entry) at any one time. All other material is lost before it can reach those higher mechanisms which recognize and classify input."[74] Without attention there is not existence of musical experiences.

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[72] .Piaget, Jean (1962) op. cit., p. 273
[73] . Ibid., p. 273

[74]. Sloboda, John, A, (1985) op.cit., p.166.

In order to perceive an event it must be focused upon it, so attention precedes perception, a term which covers according to Reber "....those processes that give coherence and unity to sensory input"[75] in other words the mind's interpretation of sensory information. According to Mussen et al, "the goal of perception is to understand events in the world to match what is sensed to some cognitive unit"[76] Among the events that the child is capable of perceiving are sounds. The richer his repertoire of sounds, the more likely he is to rely on them for further use. Another process whereby individuals use the information available in the memory to search for what information to select it is the selection process.

The selection process is a constant search for relevant and pertinent information. Before an image may be selected it must be the object of attention but also after it is selected attention must be maintained. This process may be visualized as two sides of the same coin, in other words, as two aspects of the same mental process. This is the case when pupils are involved in audience-listening and composing activities, as exemplified in our model. The control of this selection and attention process is a very important skill which should always be viewed as a relation of the present (attention) to the past (selection).

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[75]. Reber, Arthur, S., (1985)) op.cit., p.527.

[76]. Mussen, Paul H. et al., (1956), Op.cit., p.278.

For this reason we need to help students to categorize and store as much musical information as possible and to teach them how to attend to and select music which will help them to perceive future musical events through audience listening, and to use them musically for composing. With these additional associations we have extended our model representing the mental activities involved in the processing of musical stimuli and the manner in which they function as discussed above. The arrows indicate the processes of association that are happening between intelligence and memory as well as between audience listening and composing. (See Fig.1)

Fig.1.

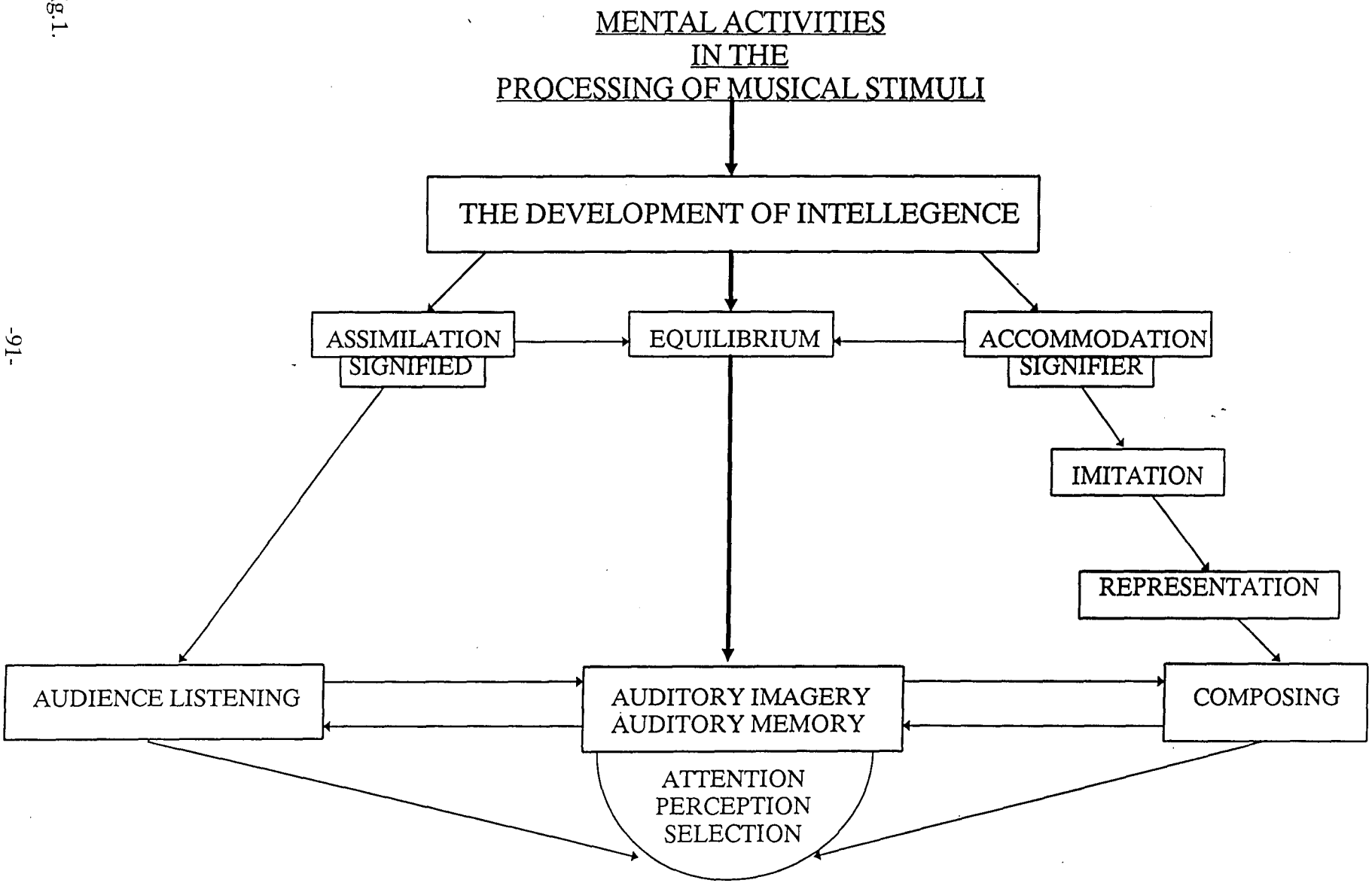
MENTAL ACTIVITIES
IN THE
PROCESSING OF MUSICAL STIMULI
THE DEVELOPMENT OF INTELLEGENCE
ASSIMILATION
SIGNIFIED
EQUILIBRIUM
ACCOMMODATION
SIGNIFIER
IMITATION
REPRESENTATION
AUDIENCE LISTENING
AUDITORY IMAGERY
AUDITORY MEMORY
COMPOSING
ATTENTION
PERCEPTION
SELECTION

FIG. 1.

In the consideration of the process of audience listening and composing we need to have in mind various complicated factors. First of all, the processing of musical stimuli is not a linear process, i.e. the stimuli do not begin at the ear and travel straight towards musical experiences which might afterwards enhance composing, because often the musical stimuli, in their way are split in various directions during their processing. Some of them may move into subconsciousness, some may be discarded, some others may be stored into memory, some of them may move backward for refinement and enhancement by feedback, while others reach consciousness and are brought into memory. Secondly, the process from audience listening to composing is often a two-way street which is necessary for enhancing and translating musical stimuli by feedback. The amplification and transformation of musical stimuli from listening to composing depends on the uniqueness of musical sound experiences of each individual.

These musical sound experiences are closely related to the processes of attention, perception and selection, which gradually lead through complicated processes to the formation of musical images. The more frequent incidence of repeated musical stimuli influences the inter-representation of auditory images of more specific sound stimuli, which will be maintained in the memory and used for future purposes.

Towards this process the creative activities of relating, associating, comparing, organising and categorising take place.

The preceding facts, discussions and theories provide the background material for understanding how the mental activities involved in the processing of musical stimuli influence the relationship between audience- listening and composing. We will not discuss how musical experiences are probably stored because this matter is outside the scope and intent of this paper. Probably there are aspects of this which have not yet been discovered. But the crucial point is the association process of mental activities through which we can achieve the transfer of musical images and experiences, located in memory. These are formed under the influence of audience listening activities and creative association activities and, namely, composing which generates the creation of new musical pieces. How much the musical experiences stored in memory possibly affect composing is a matter to be investigated and answered in the following chapters.

It is necessary to keep in mind that we are dealing with music by using three different, but in many ways overlapping activities; those of audience listening, composing and performing. In planning these activities we should establish a learning process which reinforces the relationship of these three activities and develop ways through which

audience - listening may affect pupils' composing and performing work. This connection might also be explored in the other direction, of how composing and performing might affect the pupils' perception of music as audience - listeners.

As I have stressed earlier, in the cases of composers, audience-listeners and performers auditory memory and auditory imagery are in constant use and their association determines the character and quality of the musical results. Always these persons have tones and rhythms in their minds and can bring them to the surface of their consciousness, when they are involved in musical activities. All the muscial images (patterns of tones etc) stored in their memories are set into motion through their musical imaginations according to the demands of the occasion or the various circumstances.

In Beethoven's case the compositional processes, according to his own remarks, take place in a way that confirms what I have mentioned above.

> "I begin to elaborate the work in its breadth, its narrowness, its height, it depth and, since I am aware of what I want to do, the underlying idea never deserts me. It rises, it grows, I hear and see the images in front of me from every angle, as if it had been cast, like sculpture, and only the labour of writing it down remains..."[77]

[77] Sloboda, John A. (1985) op.cit., pp.107-108.

In music education we should involve all the students in all the activities mentioned above. By using this approach each activity can influence the others and all three activities can influence the musical perception of students, gradually leading to the storage of musical images and felt musical experiences generated by these activities. The stored musical images and felt musical experiences can be used by students in similar musical situations, an approach which fosters creativity and shows students how to recognise relationships between and among musical sound events generated by audience listening, composing and performing activities, a situation which reinforces a deeper affective experience.

Since the issue of the learning process in music is also very important we will examine this process in two phases. The first phase is the developmental acculturation, which according to Sloboda "... is the learning that takes place as a result of our exposure to the normal musical products of our culture in childhood..."[78] This knowledge is gradually acquired through everyday social experiences of the surrounding culture without any self-conscious or teaching effort, and tends to be universal in a culture. The second phase is the "acquisition of specialized skills"[79] which enhances the child's learning and development. These skills are not universal in a culture and the most effective means of gaining them is through training combined with conscious effort.

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[78]. Sloboda, John A. (1985) op.cit., p.6

[79]. Ibid. p.7

So, it is the job of parents, teachers, students, cognitive psychologists etc. to form a comprehensive music programme, which increases the musical responsiveness of children and leads them to the development of their musical skills according to their capacities.

PART THREE

THE RESEARCH PROJECT

THE INSTRUMENT OF ASSESSMENT

THE REPLICATION OF THE SWANWICK-TILLMAN DEVELOPMENTAL MODEL IN CYPRUS

THE NEW EXPERIMENT

CHAPTER 5

THE INSTRUMENT OF ASSESSMENT

THE SWANWICK-TILLMAN'S SPIRAL OF MUSICAL DEVELOPMENT

1. Introduction

In Europe, educational initiatives concerning the development of musical competence have been undertaken from the early years of this century when, as Howard Gardner states, "... there was a fair amount of interest in the development of artistic abilities in children, including the growth of musical competence."[1] This increasing interest in the musical development of children had subsequent effects in the level of research concerned with the psychology of music and the appearance of various books; referring to this matter David Hargreaves, after a brief survey of the recent books, comments about "... the healthy state of music physchology that now exists."[2] Although in these books one can detect the predominance of a cognitive approach to music, there are, as Hargreaves states, "... other aspects of the field that have been less adequately dealt with".[3] Various of these aspects are related to the area of child development in which, as Hargreaves argues, "... there are virtually no coherent psychological theories of the specific developmental process underlying

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[1]. Gardner, Howard (1985) Frames of Mind: The Theory of Multiple Intelligences, New York, Basic Books, Inc., Publishers p. 108.

[2]. Hargreaves, David J. (1986) The Developmental Psychology of Music. Cambridge, Cambridge University Press p. 4.

[3]. Ibid., p. 4.

children's musical perception, cognition or performance".[4] In this area a contribution has been made by Professor Keith Swanwick and June Tillman who had the educational initiative to undertake, between the years 1981 and 1985, a research project on the musical development of children. This was an effort which moved towards redressing in some way the balance between the acquisition of cognitive skills and the explanation of the mechanisms of development.

The whole research project was based on observations, over a period of four years of individual learning situations, in which children were involved in composing music. The collected data, 745 compositions from 48 children, was analysed and interpreted. The findings helped the researchers to map out the spiral of musical development, which was published in the year 1986 by Swanwick and Tillman in their article: The Sequence of Musical Development: A study of Children's Composition[5], and was represented by a helix[6] as shown in Figure 2.

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[4]. Ibid., p. 3.

[5]. Swanwick, Keith and Tillman June (1986): The Sequence of Musical Development, British Journal of Music Education, Vol. 3, No. 3, Cambridge pp. 305-339.

[6]. Ibid, p. 331.

Swanwick and Tillman have chosen the form of a helix or spiral for several reasons: (a) like musical development the spiral has a cyclical process, which means "reentering the spiral repeatedly"[7]; (b) it is cumulative, which means that there is an interaction between modes and; (c) it represents dialectical relationship from "the individual and idiosyncratic perspective to the socially stimulating and communally responsive".[8] The potentialities of this new sequential model have various implications for different countries of the world interested in "... the development of children's musical understanding".[9]

[7]. Swanwick, Keith (1991), Musical Criticism and Musical Development, British Journal of Music Education, Vol. 8, No. 2, p. 141.

[8]. Swanwick, Keith, (1988), Music, Mind and Education, London, Routledge, p. 67.

[9]. Swanwick, Keith, (1991), Further Research on the Musical Development Sequence, Journal of the Psychology of Music, Vol. 19, No. 1, p. 22.

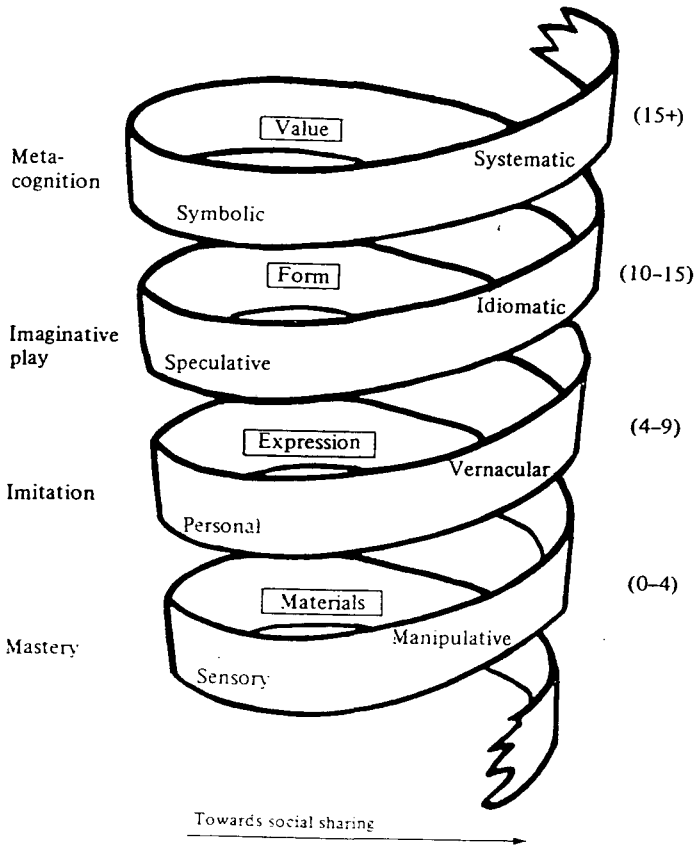

Figure 2: The Swanwick - Tillman's Model of Musical Development

Source: Swanwick Keith and Tillman June (1986). The Sequence of Musical Development: A study of Children's Composition, British Journal of Music Education, Vol. 3, No. 3, Cambridge, p. 331.

2. The Origins and the Development of the Model

The origins of the musical developmental model can be traced in the writings of Keith Swanwick in his book A Basis of Music Education (1979), where the author states that: "if problems of "meaning" represent one side of our difficulty, then the enigma of "feeling" or "emotion" is the other. Most musicians and teachers would agree that music and emotions are somehow related but to ask how they relate opens up a difficult terrain. And yet it is a crucial area for music education, for it is here, in the space between musical objects and human response, that teachers are at work, or should be".[10] Also from the same text, we notice Swanwick's concern about the dialectical relationship between the individual and the public domain. "We have seen that music has a precise public meaning on one level and a profound meaning for the individual on another level, and it has been argued that it straddles the affective and cognitive areas of experience by identifying, clarifying and structuring feeling".[11] Furthermore in the book by Swanwick and Taylor, Discovering Music (1982), we can trace some more points relating to the origins of the model. Swanwick and Taylor write that "All music has expressive character of quality... The second element is the perceptible structure of the music that is being experienced as composer, performer or listener; fundamentally the relationship between different materials and ideas".[12] Elsewhere, in the same text, they point out that "This affirms that learning in music ought to be a succession of discoveries linked with a feeling of personal mastery, thus

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[10]. Swanwick, Keith (1979), A Basis for Music Education, Slough, NFER, p. 24.

[11]. Ibid, p. 39.

[12]. Swanwick, Keith and Taylor, Dorothy (1982) Discovering Music, London, Batsford, p. 9.

drawing on what Bruner calls curiosity and a desire for competence".[13] Similar characteristics such as personal expressiveness, structural possibilities, and manipulation of instruments can be identified within the components of the spiral of musical development and especially in its eight modes.

The rationale for the theoretical analysis was first declared in a public lecture, The Arts in Education: Dreaming or Wide Awake?[14] delivered by Keith Swanwick on 4th November 1982 and then published in 1983 by the University of London, Institute of Education. In this paper Professor Keith Swanwick states that arts "are rather like play"[15] and that there is much in common between them. This is a central issue in the whole theoretical justification of the developmental spiral and relates to the point Swanwick is making when he says: "It centres on the idea that play, a vital human characteristic, is intrinsically bound up with all artistic activity".[16] Evolving out of this approach, Swanwick builds his theory on the spiral of musical development by drawing on ideas from Piaget's developmental theory of play and applying them to music education in an analogous process. Referring to this approach, Swanwick argued that mastering of activities, imitation[17] and imaginative play are "The essential

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[13]. Ibid, p. 15.

[14]. Swanwick, Keith (1983) The Arts in Education: Dreaming or Wide Awake? Special Professorial Lecture, London University , Institute of Education.

[15]. Ibid, p. 17.

[16]. Swanwick, Keith (1988) op. cit., p. 55.

[17]. Piaget, Jean, (1972) Play, Dreams and Imitation in Childhood, London, Routledge and Kegan Paul, Third impression pp. 87-89.

elements of any form of artistic engagement... and that these psychological processes have corresponding artistic elements, namely the handling and perception of sensory materials, expressive character and structure".[18] Although Swanwick was influenced by Piaget in the development of this theory, he presented an alternative application of Jean Piaget's ideas, which were not based on Piaget's age-related stages of development, but on the Piaget "who is concerned with fundamental human processes, those ways in which we make sense of and grow into the world"[19], a notion which presents man as play-maker (homo-ludens). The chief concern here is that the reader should be aware of the different approaches of Swanwick to Piagetian theories. Piaget's theory of child development and music may have influenced many music researchers but, as Rosamund Shuter - Dyson and Clive Gabriel state, "... how much of the Piagetian exposition of stages of development is relevant to music is open to question".[20]

The three elements of play mentioned above, mastery, imitation, and imaginative play, apply to all arts education and should be activated, inter-related and revisited at all ages. Referring to this point Keith Swanwick suggests:

> "It may be helpful to begin with a problem of mastery, or character, or structure, but once an activity is underway we shall be looking for a strong interaction between them; for how can we have any real experience of art without some level of mastery and some response to the elements of imitation and imaginative play?".[21]

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[18]. Swanwick, Keith Musical Criticism and Musical Development, op. cit, p. 140.

[19]. Swanwick, Keith, (1988) op., cit., p. 55.

[20]. Shuter Dyson, R. and Gabriel, Clive (1981) The Psychology of Musical Ability, 2nd edition, London ,Methuen, p. 100.

[21]. Swanwick, Keith (1988) op. cit., p. 46

Furthermore, Swanwick argues that there is a strong association between mastery, imitation and imaginative play and the three parameters of music education those of performing, listening and composing. He associates mastery with performing and points out that "In performance... there will may also be a bias towards the play element of mastery, towards the enjoyment of virtuosity".[22] With imitation in play he associates listening and he comments that: "Being in audience... if we respond sympathetically we are, to some extent, internally imitating, empathazing with its gestures".[23] And with imaginative play Swanwick associates composing and rightly points out: "Forming 'doing your own thing' may have about it a strong feeling of assimilation of imaginative play".[24]

By expanding this framework, Swanwick and Tillman build the fourth component of the spiral, which the psychologists call meta-cognition. This term, within the context of the developmental spiral, is used, as Swanwick points out, with a "... slightly more limited and special sense: indicating self-awareness of the process of thought and feeling in a value response to music".[25] In other words in this mode there is evidence of a strong sense of expression of character and a high level of new organisation of musical materials.

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[22]. Ibid., p. 43.

[23]. Ibid, p. 42.

[24] Ibid., p. 42

[25]. Ibid., p. 74.

3. Musical Development of Children

Swanwick and Tillman proposed the following four layers of musical development:

MATERIALS - EXPRESSION - FORM - VALUE

Then by studying compositions by children, mostly between the ages of three and eleven, they have identified the following eight developmental modes of musical experience, which function in dialectical form, from the individual to the public domain: from sensory response and the pleasure in sound itself to an interest in manipulating instruments (0-4 years); from direct musical personal expressiveness to musical "common devices"[26] with vernacular patterns (4-9 years);from seeking new musical ideas by speculating the established to "The emulation of accepted public performances"[27] and existing idiomatic practices (10-15 years); and from a growing "consciousness of music's affective power"[28] in the symbolic mode to "musical theorizing" and "the development of new systems"[29] in the systematic mode (15+ years).

The age levels indicated in the brackets refer to the sample of the study at that time.

The Swanwick Tillman's musical developmental model is structured carefully and is based on pedagogical and psychological theories. Although the actual shape is similar

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[26]. Swanwick, Keith, (1988) op., cit., p. 74.

[27]. Ibid. p. 79.

[28]. Ibid., p. 79.

[29]. Ibid., p. 80.

to the Manhattanville spiral diagram[30] the context of the Swanwick - Tillman's musical developmental model is very different. Whilst the Manhattanville Music Curriculum Programme is based on the conceptual approach to music in education, the Swanwick - Tillman's model focuses, as Marie McCarthy appropriately points out, "... on the individual's engagement with music and how this is transformed with age and maturation".[31]

4. The Strengths of Swanwick-Tillman's Musical Developmental Model

The most important issues which are proposed by the Swanwick-Tillman's musical developmental model are the following:

4.1 There is sequential and cumulative learning, which is presented by eight developmental modes, "through which", as Swanwick argues, "The musical behaviour of children can be traced".[32] This provides a useful framework for the development of a progressive true music curriculum and the appropriate assessment of pupils at the various stages of their development. This point focuses on how music education should be achieved and developed, something, which is amplified more by the writings of Swanwick who states: "Music teaching can be effective only when the nature of music itself is understood and the development of students respected".[33]

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[30]. Manhattanville Music Curriculum Program Synthesis (1970), Media Materials Inc., Bardonia, New York, p. 103.

[31]. McCarthy, Marie F., Harvard Educational Review, Vol. 61, No. 1, Feb. 1991, p. 102

[32]. Swanwick, Keith (1988), op. cit., p. 140.

[33]. Ibid, p. 141.

4.2 There is a shift from the quantitative approach to musical development, which is related to elements of music, features, skills etc to the qualitative "nature of musical response", which focuses on transformations and leads, as Swanwick states, "... into the succeeding developmental thrust. We do not merely pass through one of these modes, but carry them forward with us into the next".[34] This approach "breaks" the model from the traditional quantitative bias and gives to it, as Marie McKarthy correctly points out, "... the potentials to open up new discourse on artistic development"[35].

4.3 It represents dialectic processes between the individual (the left hand side of the spiral) and the "public" engagement or social sharing in music (the right hand side of the spiral), which are dynamic processes and give musically interesting results. We can assume that the way music is presented in the classroom is a part of these processes which integrate the traditional cultural musical heritage and world musics. Referring to this point Professor Keith Swanwick emphasizes the educative values of transcending cultures and says:

> "The new challenge to music education comes from the music of the south and east. Can these diverse styles be floated in the mainstream of music education? Should they be? The answer to the first question is that they surely can be if we are prepared to regard them as music; not as ethnic or national flags or as exotic illustrations of a culture. This is why I prefer the integrative concept "inter-cultural" to the more divisive and sometimes racist idea of "multi-cultural"... The answer to the second question is tied in with this and relates to our attitude to

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[34]. Ibid, pp. 63-64.

[35]. McCarthy, Marie F., (1991), op. cit, p. 98.

> the accessibility of other musics. A range of styles should be experienced in education, not as "examples" of other cultures, with all the stereotyping and labelling that goes with such an approach but as objects and events carrying expressive meaning with a cohesive form".[36]

4.4 It provides appropriate assessments which are related to the musical development of individuals at different stages. Professor Swanwick, drawing from "an adequate theory"[37], has devised criteria for assessing composition, performance and audience-listening, which are based on qualitative differences instead of quantitative approaches to musical development. Referring to this point Swanwick emphasizes that: "To be useful criteria statements should indicate qualitative differences rather than quantitative shifts".[38]

It is evident that one of the most valuable outcomes of the Swanwick - Tillman's musical developmental model is the focus on how music education is achieved. Specifically, it is related to the challenge of how teaching and learning is sequenced and linked with the pupils' assessment according to their stages of development. In order to indicate the progression of children's achievement Swanwick has developed musical criteria for evaluating compositions, performances and audience listening activities. These criteria are based on a new theory for music education which suggests different organisational structure and assessment according to the children's stages of development.

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[36]. Swanwick, Keith (1988) op. cit., pp 112-113.

[37]. Ibid, p. 151.

[38]. Ibid., p. 151.

The future of the Swanwick Tillman's spiral of musical development may be precarious, because its wider applicability is very much dependent on teaching style, which should be related to the individuals' learning style according to their stages of development. This perhaps should have implications for the initial or preservice music education of teachers and their inservice training, which should both be based on the sound epistemological theory and the dynamic structure of the spiral of musical development, because they enlighten the way for the future of music education. I also suggest that this notable achievement should be disseminated to other countries of the world, interested in building their music educational systems on the epistemological theory of this model, if they want to assure their future developments.

5. The Model as the Instrument of Assessment

Having studied the Swanwick and Tillman's epistemological model of musical development and its implications on the development of a sequential progressive true curriculum programme in music and its evaluation, I am proposing to use it as the instrument of assessment for the purpose of this study.

Particular issues that need to be carefully examined are the validity and the reliability of the Swanwick - Tillman's musical developmental model. According to Leonhard and House, validity and reliability "...are closely interrelated and represent the most important factors in the selection of an evaluative procedure".[39] Roger Phelps states

[39]. Leonhard, Charles and House, Robert W. (1959), op. cit., p.396.

that validity "...is an indication of whether an instrument or device measures what is supposed to".[40]

A brief consideration of the works of Bunting (1977), Moog (1976), Ross (1984), Gardner (1973) and Piaget (1951) shows that there is already in the literature supportive evidence serving the theoretical frame of the developmental spiral.

Firstly, Robert Bunting, partly influenced by his observations of his own pupils at work, in the Working Paper 6 of the Schools Council Project, Music in the Secondary School Curriculum (1977), identifies the following eight modes of musical engagement, which have influenced conceptual classification of the modes of the musical developmental model, though Bunting is not concerned, as Swanwick writes, "to order modes in a developmental way".[41]

(a) The neurological, which he describes as "the reaction of the nervous system to sensations of timbre, rhythm, and pitch quite independently of the analytical mind".[42]

(b) The acoustical mode of the perception of music which, as he states, "can be affected as much by the degree of resonance a sound is given, as by its pitch and syntactical meaning".[43]

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[40]. Phelps, Roger P. (1980) A Guide to Research in Music Education, (Second Edition), The Scarecrow Press, Inc., U.S.A. p.228

[41]. Swanwick, Keith (1988), op. cit., p. 64.

[42]. Bunting, Robert, (1977) The Common Language of Music, Music in the Secondary School Curriculum, Working Paper 6, Schools Council, York University, p.3.

[43]. Ibid, p.3.

The above modes as Swanwick states, "... are evident in the young child's primary concern with the tone and resonance of instruments, experimenting with short and long sounds, slow and fast shakes, or fingers and fists on the surfaces of drums".[44]

(c) The mechanical mode, which Bunting describes as "physical activity in relation to an instrument or the voice"[45] and which can be seen "at work", as Swanwick states, "when the physical aspects of instruments themselves determine the organization of the music".[46]

The neurological, the acoustical, and the mechanical mode relate well with the sensory and manipulative modes of the musical developmental model.

(d) The illustrative mode, which as Bunting points out is "a way of giving meaning by association"[47], a theory which implies for Bunting that music is in a way illustrative, something on which Swanwick holds a different view and as he rightly argues:

"...there is a powerful tendency for music to be expressive, without being in any way illustrative or representational".[48] Moog holds a very similar view when he writes "The musical sound does not give information about anything, nor does it stand as a

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[44]. Swanwick, Keith (1988), op. cit., p.64.

[45]. Bunting, Robert, op. cit., p.3.

[46]. Swanwick, Keith (1988) op. cit., p.64.

[47]. Bunting, Robert (1977) op. cit., p.3.

[48]. Ibid, p.65.

representative for anything. It is neither source of information nor symbol".[49] The mode of personal expression of the musical developmental model is the same as what Bunting appears to call (e) "symbolic" and he describes it as "mysteriously, musical rhythms and tensions seem to mirror the flow of feeling within us in a direct, non verbal and non-illustrative way. Most of us would consider this music's most important quality and it is not a thinking process but a feeling one".[50] Bunting believes that more appears later, but Swanwick holds a different view, and he points out that "we detect this abstract expressive quality much earlier on in the musical behaviour of children".[51]

From the personal expression we move towards the (f) vernacular, which Bunting describes as a broad range of "dialects" (classical, rock, jazz, folk etc).[52] Elsewhere he calls it "the common language of pop song, film music, military band, church music, light classics and so on."[53] This relates to much extent, but not exactly, to the vernacular mode of the musical development model, which as Swanwick says is "swept up into a community of musical common places".[54]

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[49]. Moog, Helmut, (1976) The Musical Experience of the Pre-School Child, translated by Claudia Clarke, London: Schott, first published in Germany, 1968, p. 34.

[50]. Bunting, Robert (1977) op. cit., p.4.

[51]. Swanwick, Keith (1988) op. cit., p.65.

[52]. Bunting, Robert (1977) op. cit., p.4.

[53]. Ibid., p.1.

[54]. Swanwick, Keith (1988) op. cit., p.66.

(g) The speculative mode, which as Bunting believes, is when "a composer may seek out new ideas by speculating on accepted musical conventions. Extreme cases are atonality and indeterminacy but less radical speculations have always been part of our musical tradition".[55] Swanwick agrees with Bunting's statement and he adds that "Around the age of 10, though usually closer to 11, we observed in children's compositions the emergence of speculation out of the commonplaces of the vernacular".[56]

According to Bunting another mode of musical perception is (h) the social. Bunting writes: "the relationship between performer or composer and listener has a social meaning which may affect the composer's style or the listener's judges. Even more significant are the relationships between performers, especially when they are themselves the creators of music".[57] This relates to the form of the spiral of musical development, which represents dialectic processes between the individual and the social sharing and communal response to music.

Secondly, Helmut Moog, in his research to investigate the musical experience of the Pre-school child, observes that "the six months old baby does not give his attention, either to music which has the greatest degree of intensity, or which has the richest

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[55]. Bunting, Robert (1977) op. cit., p.4.

[56]. Swanwick, Keith, op. cit., p.72.

[57]. Bunting, Robert, op. cit., p.4.

rhythm" but "his attention is given first and foremost to the sound itself".[58] Although between the ages of nine months and one year there is "a marked extension of musical response",[59] which gradually is increased at the beginning of the second year. Still during the second year, it is the "sensory impression of the sound, together with rhythm, which lie at the heart of musical experience".[60]

The analysis of children's songs showed that, apart from the fascination of sound itself, children from one to two years are beginning "to produce sung responses"[61] which are evidence of a shift from sensory musical experiences to the control of musical materials, moving so in the form of mastery.

Another important sign of progress occurs when children move to music. Between the ages of eighteen months and two years, Moog observed that "...about ten per cent of children begin, for short stretches of time, to match their movements to the rhythm of the music."[62] Although this, as Swanwick states "is the first presage of response to expressive character in music",[63] I agree with Swanwick when he says that, when children move to music, this is "a physical imitation of sonorous gestures

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[58]. Moog Helmut (1976), op. cit., p.55.

[59]. Ibid., p. 67.

[60]. Ibid, p.86.

[61]. Ibid, p. 86.

[62]. Ibid, p. 74.

[63]. Swanwick, Keith (1988) op. cit., p.59.

or character and ...its presence at this stage is a helpful outward manifestation of an early imitative response."[64]

Furthermore Moog identifies that around the age of four another group of songs emerges, which he calls "imaginative songs". This group of songs according to his observations "consists partly of spontaneous singing by the children, partly of snatches of songs which they know or new versions of these."[65] Here, as Swanwick states, "is a hint of the emergence of imaginative play, the forming of new structural relationships from scraps of tunes already absorbed during earlier stages".[66]

The above mentioned observations of Moog support the theory of Swanwick and Tillman (1986), that there is a sequence of musical development, which children follow through mastery, imitation and imaginative play. One interesting point Hargreaves is making, is that we must be cautious about the status of Moog's musical development as a general developmental description, "since it is essentially subjective and cultural-bound: but it is nevertheless based on a much larger subject-sample than any comparable investigation."[67]

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[64]. Ibid, p. 59.

[65]. Moog, Helmut (1976) op. cit., p. 114.

[66]. Swanwick, Keith (1988) op. cit., p. 60.

[67]. Hargreaves, David J. (1986) The Developmental Psychology of Music, op. cit., p. 63.

Thirdly, Malcolm Ross, with his work on aesthetic development in the arts, reinforces the theory of Swanwick and Tillman on the sequence of musical development, by pointing out the following four stages of development in music:

1. Years 0-2. There is "pure-sensuous engagement with sound materials"[68]

2. Years 3-7. A stage which is characterized by "musical doodling, particularly vocal doodling", and also by "practice is of the essence, leading to the tuning of the ear and progressive mastery of sound structure and patterns."[69]

3. Years 8-13. At this stage, according to Ross, "children concern with the conventions of musical production and predilection for creating and hearing the right (i.e. harmonic) sounds."[70] The stage is characterized as "the impressive period of musical development."[71]

4. Years 14+. Ross writes that, at this stage, music is taking "a form of communication and language of personal expression - as

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[68]. Ross, Malcolm (1984) The Aesthetic Impulse, Oxford: Pergamon Press, p. 129.

[69]. Ibid, p. 129.

[70]. Ibid., p. 129.

[71]. Ibid., p.130.

embodying meaning and vision",[72] which is significant for an individual, for a small group and for the human species.

The same transformations of musical development as those described above by Malcolm Ross can be clearly discerned in the theory of Swanwick - Tillman's musical developmental model.

Professor Howard Gardner of Harvard University, in his book "The Arts and Human Development", proposes three systems in the organism, that of making, perceiving and feeling, which exist independently at birth and are found throughout life. He states: "The outputs of the making systems are acts or actions; the products of the perceiving system are discriminations or distinctions; the results of the feeling systems are affects."[73] Gardner claims that these three initially independent and discrete systems in infancy "gradually begin to influence each other",[74] a situation in which development is evident; then they reach a point at which no system can function in isolation of the other two. However when this is happening, and how the systems interact, are subjects which are related to children's acquisition and use of symbols. And although it is not my intention to get into details of Gardner's work, I shall summarise here the way he has organised symbols because there are clear correspondences with the mapping of the developmental spiral.

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[72]. Ibid., p. 130.

[73]. Gardner, Howard (1973) The Arts and Human Development, New York: Wiley p. 37.

[74]. Ibid., p. 39.

Gardner, in his work, has organised symbols in the following three broad stages of artistic development:

1. Presymbolic Period: Sensorimotor Development (ages 0-1)

During their first year of life children "are alert to a musical stimulus"[75] and during their first two years of life they are "activated as they listen to music".[76]

2. Period of symbol use (ages 2 to 7)

By the age of two and three children "are able to reproduce melodies quite accurately."[77]

By the age of five most children "become actively involved with the musical stimulus and their feeling systems appear to be activated by their contact with music."[78]

The ages six and seven are important in musical development.

By the age of six they have "already achieved a working relationship with musical symbols, playing and performing and perceiving with some accuracy."[79]

By the age of six to seven there is evidence that the children are able in working and understanding the general mechanisms of the symbol system of the music of a

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[75]. Ibid., p. 190.

[76]. Ibid., p. 190.

[77]. Ibid., p. 190.

[78]. Ibid., p. 190.

[79]. Ibid., p. 196.

"culture's code",[80] something which leads towards social sharing and involves "the feeling system of children at a young age."[81]

3. Later Artistic Development (age 8 and on)

By the age of eight and onwards children's interaction with music is characterized by a sense of competence, balance and integration.

At this stage Gardner says that "Skill development, familiarity with the code, accretion of experience, and greater sophistication may all follow."[82]

The above mentioned three systems in the organism and Gardner's account of development have implications that support the Swanwick - Tillman's theory on the spiral of the musical development which demonstrates a sequence of musical phenomena.

Finally, an important part of the roots of the Swanwick -Tillman's spiral of musical development can be traced in the theories by Piaget and especially, as I have mentioned earlier, in the idea of play, which as Swanwick states "... is intrinsically bound up with all artistic activity."[83] Although we can admit that there are disagreements between other psychologists and the work of Piaget, its continuing importance is evident; this is the point Hargreaves is making when he says that

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[80]. Ibid., p. 233.

[81]. Ibid., p. 197.

[82]. Ibid., p. 233.

[83]. Swanwick, Keith, (1988) op., cit., p.55.

"...researchers continue to test it, and that educators continue to formulate practical implementations."[84] While Piaget's theory leaves out many of the activities which characterize the arts, our conception of the arts, as Hargreaves states, "...must involve an implicit understanding of the complementary role of science."[85] Reflecting the work of Piaget, Swanwick and Tillman linked the cognitive developmental approach, which is related to children's thinking, to children's creative expression through composing. In their spiral of musical development, the processes of assimilation, accommodation and equilibration, as proposed by Piaget, exist within each mode which is reactivated and revisited by every new encounter with music. Referring to this theory Hargreaves reinforces our point in the following manner:

> "We assimilate new objects and events that we encounter in our environment: we accommodate to these objects and events by changing our ways of thinking about them; and our thinking moves to a new level of equilibrium as a result. Assimilation and accommodation are indissociable aspects of any developmental acquisition".[86]

Furthermore, in considering sequencing, Lyle Davidson and Larry Scripp point out that, "A spiral of assimilation and accommodation exists ...mapping children's developmental shift from an absorption with their own individual work to an appreciation of tradition and the social aspects of their work. Thus this growth

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[84]. Hargreaves, David J., (1986), op., cit., p.50.

[85]. Hargreaves, David J., (1989) op. cit., p.6.

[86]. Hargreaves, David J. (1986) op., Cit., p. 33.

reflects the child's increasing ability to decentre from self."[87] This point is an interesting one and relates to Piaget's view that children in pre-operational thinking are essentially egocentric, whilst in concrete operational thinking they become able to "decentre." Referring to this point of "centering" Hargreaves states: "Piaget held that egocentricity manifests itself in various ways, such as the inability to appreciate the visual perspectives and the social roles of others."[88] This view has been criticised by Margaret Donaldson in her book "Children's Minds" (1978). Donaldson's general conclusion is that ".. pre-school children are not so limited in their ability to "decentre", or appreciate someone else's point of view, as Piaget has for many years maintained."[89] This point is particularly relevant to Swanwick and Tillman's spiral of musical development in which the broad view of "decentering" stimulated by the learning processes have their implications on how children learn to use and understand music. Such a useful response to music, in formal music education is based on the deep structure of the subject, which is inevitably related to the idea of musical criticism; it focuses on the totality of the experience and respects the needs of children. These are essential issues dealt with by Swanwick in his theoretical frame work in mapping the developmental spiral.

Presently, the evolving idea, that there is an interdependence of the cognitive development and the social and the affective domains, is relevant to the mapping by Swanwick and Tillman of the spiral of musical development in which as Lyle

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[87]. Hargreaves, David J. (1989), Children and the Arts, Open University Press Op., cit., p. 72.

[88]. Hargreaves, David J. (1986) Open University Press, p. 42.

[89]. Donaldson, Margaret (1978), Children's Minds,London: Fontana/Collins, pp. 30-31.

Davidson and Larry Scripp state: "This research suggests intriguing connections between stages of musical conception through inventing music."[90] These signs, with the growing realisation that cognitive development interrelates with the social and affective domains facilitates also our understanding of artistic development which as Hargreaves accurately points out: "...works of art are probably more capable of eliciting complex aesthetic, affective, and cognitive responses than are stimuli in any other domain."[91] Focusing on this point Gardner has suggested that "Rather than contrasting affective and cognitive components, feeling and thoughts, it may be preferable to think of them as two kinds of systems or processes that may be operative in the organism at any time and in various combination."[92] It is certain that these latter views gradually break down barriers and will lead to new approaches, which as Hargreaves states: "... cognitive development embodies changes in the social and affective domains and vice versa."[93] These central problems, which fit into the view of the musical development of human beings, have been examined in the theory of Swanwick -Tillman's spiral of musical development where it is evident that there is a shift from the quantitative approach to musical development to the qualitative nature of musical response.

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[90]. Hargreaves, David J. (1989) op. cit., p. 72.

[91]. Hargreaves, David J. (1986) op., cit., p. 42.

[92]. Gardner, Howard (1973) op., cit., p. 22.

[93]. Hardgreaves, David J. (1986) op., cit., p. 42.

In Summary the above mentioned theories and categorisations are generally accepted and receive general support from empirical research. In the mapping of the developmental spiral we find close relations between the literature and its theoretical framework. Specifically, the work of Piaget provides sufficient evidence that there are close correspondences between "... explicit descriptions and the implications of the developmental spiral."[94]

The first three layers of the developmental spiral "... sensitivity to and control of sound materials", of "expressive character" and "structural ralationships..."[95] correspond with Piaget's sensory - motor intelligence, representational imitation and the stage of operations as described in Chapter 4 of this thesis. Also the processes of assimilation, accommodation and equilibration, as well as imitation and play, as proposed by Piaget and explained in Chapter 4 and at the beginning of this Chapter, exist in each mode of the developmental spiral. For instance we can see from early childhood children experimenting with sounds, assimilating them to their own worlds. As soon as they can repeat a simple musical phrase or a simple rhythm, accomodation takes place; this repetition ".. is made possible by the act of imitation".[96] At this stage assimilation and accommodation generate together sensory - motor intelligence. Later, through representational imitation, when the basic schemata are developing into images and symbols, children move towards the

[94] Swanwick, Keith, (1994), Musical Knowledge: Intuition, analysis and music education, London: Routledge, p.179.

[95] Ibid., p.96.

[96] Ibid., P.96

expressive character of music. According to Swanwick "... Representative imitation lies at the root of musical expressiveness. To produce or empathise with expressive character is essentially to imitate elements of perceived feeling qualities, abstracting them from 'life' and transforming them into gestures"[97] Representational imitation is described as "...seeing the possibility of representing life experience in music..."[98] and passes from assimilative activities related to personal expression to accommodative activities related to "... vernacular pattens and conventions 'out there' in the environment of musical discourse."[99] Children's understanding of musical form is related to the period of operations, and according to Swanwick is analogous to what he has called "imaginative play - play with images - where expressive characterisations are brought into new relationships and enjoyed as form."[100] The speculative element is biased towards assimilatory activities whilst the idiomatic element is biased towards accommodative activities "... with the distinctive 'games' developed within the rule framework of paricular musical styles".[101]

The above mentioned factors provide sufficient evidence that the musical development, as mapped out in the Swanwick-Tillman's musical developmental model, is analogous to the mental development as articulated in the theories of Piaget. Furthermore the use of parrallel concepts which both exist in Piaget's work and in the theoretical framework of the developmental spiral justify the validity of the Swanwick - Tillman's musical developmental model.

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[97] Swanwick, Keith, (1994) op., cit., p.97.
[98] Ibid., p.97.
[99] Ibid., p.97.
[100] Ibid., p.97.
[101] Ibid., p.98.

After examining the issue of validity of Swanwick - Tillman's musical developmental model, it became necessary to check for reliability. Phelps states that reliability "... is an indication of whether an instrument or device will show the same results under identical or comparable conditions."[102] Statistically it is shown as correlation coefficient. For this and other reasons, such as the lack of objectivity in the assessment process of the original research, the sample of children and the small amount of data from older children, replication of the elements of the Swanwick / Tillman study became essential in order to check for reliability. The research trail was carried out in Cyprus, a different cultural setting than that of England. This leads us to the next chapter of this thesis.

[102] Phelps, Roger, P., (1980), op., cit., p.228.

CHAPTER 6

THE REPLICATION OF THE SWANWICK-TILLMAN'S MUSICAL DEVELOPMENTAL MODEL IN CYPRU S

1. Introduction

The purpose of the replication of the Swanwick-Tillman's musical developmental model mapped out in 1986[1] was to study its reliability i.e. its ability as a measuring instrument to produce the same results when repeated and no change has occured in the thing being measured.[2] For this reason further research was conducted in Cyprus.

2. Research Methodology

2.1 Collection of Data

During May and June of 1990, one hundred and twenty two (122) pupils between four and sixteen years of age from mainly urban, but also rural areas, were randomly selected.These subjects underwent an experimental procedure and the findings were assessed.

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[1] Swanwick Keith and Tillman June (1986) The Sequence of Musical Development, British Journal of Music Education, Vol.3, No.3, Cambridge, pp 305 - 339.

[2]. Burroughs G.E.R. (1971) Design and Analysis in Educational Research, Educational Monograph No. 8, School of Education, University of Birmingham, pp 71-72.

The sample was selected by picking, at random, from a drum, usually two names and sometimes three names of pupils from each section which were noted on slips of paper.

The Experiment was carried out in fourteen (14) schools, in which musical materials and facilities were available.

The schools selected were the following:

- Three (3) kindergarten
- Three (3) Primary Schools for lower grades (5+ to 8+ age group)
- Three (3) Primary Schools for higher grades (8+ to 11+ age group)
- Two (2) Primary schools for all grades (5+ to 11+ age group)
- Two (2) Secondary schools (Gymnasiums for 11+ to 14+ age group)
- One (1) Secondary school
  (Lyceum for 14+ to 17+ age group)

Table 2 shows the name of each school and the number of pupils from each school involved in the experiment.

TABLE 2 **Name of Each School and the Number of Pupils**

	Name of School	No of pupils	Classes
(1)	**KINDERGARTENS**		
1.1	Butterflies	4	Pre-Primary Mixed age-group
1.2	Kinoniki Merimna	4	Pre-Primary Lower age-group
1.3	Kinoniki Merimna	7	Pre-Primary Higher age-group
(2)	**PRIMARY SCHOOLS**		
2.1	Dhali B'	15	All Grades (I-VI)
2.2	Elenion	9	Lower Grades (I-III)
2.3	Elenion	9	Higher Grades (IV-VI)
2.4	Strovolos B'	9	Higher Grades (IV-VI)
2.5	Strovolos A'	4	Lower Grades (I-III)
2.6	Strovolos A'	6	Higher Grades (IV-VI)
2.7	Kornesios	8	All Grades (I-VI)
2.8	Anthoupoli	27	Lower Grades (I-III)
(3)	**SECONDARY SCHOOLS**		
3.1	Agios Dhometios	8	Lower Grades (I-III)
3.2	Engomi Gymnasium	4	Lower Grades (I-III)
3.3	Kykko B' Lyceum	8	Higher Grades (IV-VI)
TOTAL NO OF SCHOOLS 14		**122 PUPILS**	

Twelve (12) teachers were involved in the experiment. Eight (8) of the teachers who participated were music specialists, and the other four (4) (especially for the kindergarten and the lower grades of Primary Schools) were qualified teachers, but not specialist music teachers; however they had an enthusiasm for music and had developed satisfactory skills in teaching the subject.

Each teacher was responsible for approximately thirty (30) children. The majority of the teachers involved in the experiment carried out the experimental treatment in more than one class.

Bearing in mind the fact that listening lies in the heart of music and it is a sine qua non musical activity, which plays a supportive role and embodies composition and performance, we used audience-listening to relevant material as a prerequisite to asking children in school to make music.

For this reason, the researcher selected the following extracts from various recordings which relate to the three music curriculum projects:

1. Contrasts
2. Pentatonic Scale
3. Pedal Notes

1.	CONTRAST OF SOUNDS
1.1	SLOW-FAST
1.1.1	Gershwin: Preludes for Piano No 2 (slow)
1.1.2	Pinto: "Run, Run" from Memories of Childhood (Scenes Infantas) (fast)
1.1.3	Stravinsky: "Tarantella" from Pulcinella Suite (fast)
1.1.4	Grieg: "Ase's Death" from Peer Gynt Suite No 1 (slow)
1.2	HIGH-LOW
1.2.1	Piccolo
1.2.2	Double Bass
1.2.3	Triangle
1.2.4	Tuba
1.3	LOUD-SOFT
1.3.1	Gliere: "The Red Poppy" Russian Sailor's Dance (loud)
1.3.2	Brahms: Cradle Song
1.3.3	Pinto: Sleeping Time
1.3.4	Copland: "Circus Music" from the Red Pony
2.	PENTATONIC SCALES
2.1	"Menousis" Greek folk song
2.2	Orff Institute, improvisation from the record "Sound Plays" on the notes g e d c
2.3	"Yianni mou to mantili sou" Greek folk song
2.4	Orf Institute: "Ein Mann in Brunnen Gfalln" based on the notes g a g e d c

3. PEDAL NOTES

3.1 Tchaikovsky: "Arabian Dance" from Nutcracker Suite

3.2 R. Schumann: Novellette No. 5

3.3 J.S. Bach: Musette from "Anna Magdalena"

3.4 J. Brahms: Serenade in D Major, opus 11.

The above mentioned material (the examples on cassette tape No.1 accompany this study) was recorded on cassette tapes and was administered to the twelve (12) teachers involved in the experiment.

During visits to their schools, sufficient time was allowed to provide a full description of the research project, to solve any problems concerning the experiment, and to clarify matters in general. To gain a broader view of the situation, a questionnaire was developed and distributed to the teachers to fill in[3].

The time alloted for composition in each session was made on the basis of the children's normal development. So, according to the age group of the children involved in the experiment, an analogy of time between the younger and the elder children has been followed. Such an approach was considered appropriate because development is related to attention and perception processes, abilities which differ

[3]. Appendix 2. Questionnaire distributed to the teachers to fill in.

between children of various ages. This is referred to in Chapter 4 of this thesis. With age the child increases these abilities a point which Mussen, Conger and Kagan stress: "... Development brings increased skill at maintaining focused attention on an event, without being distracted, and as a result, the child's perceptions become more efficient, more selective, and more accurate."[4] According to this statement, which is stressed by various researchers, the children of each age group involved in the experiment would have a comparable amount of time for composing. This was made on the basis of their normal development. The approach of using, as a criterion, the normal development of children instead of their musical development is perhaps desirable for this experiment, because, as Howard Gardner says, "little has been firmly established about the normal development of musical competence ... in any culture"[5]

For the purpose of the research, the children who participated in the experiment were all given the opportunity to listen to the recorded material related to each of the three music curriculum projects. Afterwards, without the teachers' intervention, they were asked to choose instruments and make music. At this point it could be mentioned that the selected children worked in various quiet places made available by each school.

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[4] Mussen, Paul, H., et al. (1974), Child Development and Personality, New York: Harper & Row, pp.285 -286

[5] . Gardner , Howard (1985) Frames of Mind, The Theory of Mulltiple Intelligences, New York: Basic Books, Inc., p.108

The selected children worked for three sessions on each of the three, above mentioned, music curriculum projects, according to the time allotted to them. At the end of each project, namely, at its third session, the teacher recorded the outcomes of these activities.

All the children involved in the experiment produced three different compositions based on the idea of "contrast" and the materials of pentatonic scales and pedal notes:

Table 3shows the time allotted to musical composition for each age group in each session.

TABLE 3 **Age Groups and Time Allotted for Composition in Each Session**

Age Group	Time Allotted for Composition In Each Session
4 years	6 minutes
5 "	7 "
6 "	8 "
7 "	9 "
8 "	10 "
9 "	11 "
10 "	12 "
11 "	13 "
12 "	14 "
13 "	15 "
14 "	16 "
15 "	17 "
16 "	18 "
17-18 "	20 "

The experiment lasted for five weeks in May and June of 1990. During this time, the researcher was in contact with the teachers to provide on-going assistance as the experiment was carried out.

3. Analysis of the Data

After the collection of the data, which mainly included the recordings of compositions of one hundred and twenty two pupils (122) from pre-primary, primary and secondary education (over 366 items in all), and the completed questionnaires received from the teachers, we investigated in particular the outcomes of the first music project based on "contrasts". This choice was made because the idea of contrasts can be handled easily by young children, who might find problems on pentatonic scales and pedal notes, and the musical outcomes of contrasts can be interpreted at any layer of the developmental spiral, from materials to form.

Then the writer prepared a numbered list of four age groups:

[4 - 5]; [7 - 8]; [10 - 11]; [14 - 15].

The seventy two (72) pupils were listed by the name of their school, their age group, and sex as shown in Table No. 4.

(The items from "Butterfies" Kindergarten were not included in the analysis procedure because the children composed their pieces working in small groups instead of working independently).

TABLE 4 Numbered List of Schools and Pupils by Age Group and Sex

	Age Groups and Schools	Boys	Girls
	1. Age Group 4 -5		
1.	Kinoniki Merimna Kindergarten	3	4
	2. Age Group 7 - 8		
2.	Strovolos 'A' Primary School, Lower Grades	2	2
3.	Elenio Primary School, Lower Grades	3	4
4.	Dhali B' Primary School, All Grades	2	3
5.	Anthoupoli Primary School, Lower Grades	6	8
	3. Age Group 10 -11		
6.	Strovolos A' Primary School, Higher Grades	3	1
7.	Strovolos B' Primary School Higher Grades	2	3
8.	Elenio Primary School, Higher Grades	3	3
9.	Dhali B' Primary School All Grades	1	2
10.	Kornesios Primary School, All Grades	1	2
	4. Age Group 14 - 15		
11.	Aghios Dhometios Gymnasium	3	1
12.	Engomi Gymnasium	3	
13.	Kykko B' Lyceum	3	4
	Total	35	37

Total No. of Schools: 13 Total No. of Pupils: 72

The prepared list of the names of seventy two (72) pupils involved in the experiment was used to select, at random, seven items from each of the four age groups. (Using the table of random numbers)[6] . Since the pupils from "Butteflies" Kindergarten were rejected, all the seven (7) pupils of the age group 4-5 involved in the project were selected. The researcher, by using the table of random numbers[7] , prepared a numbered list of twenty eight (28) pupils by age and school. Also, a cassette tape was prepared with their items of composition assembled, in random order. Four (4) Independent Judges were selected, each having more than eighteen (18) years of service in teaching music and working at the Pedagogical Academy[8] and the Pedagogical Institute of Cyprus[9] .

The edited tape recording (the examples on cassette No. 2 accompany this study) and a list to be completed were administered to the four (4) judges[10] . The name and age of each child was not revealed.

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[6] . Abridged from Table xxxiii of Fisher and Yates, Statistical Tables for Biological, Agricultural and Medical Research, Published by Longman Group Ltd, London.

[7] Ibid.

[8]. Pedagogical Academy: The Institute responsible for the Training Programmes for Teachers of Pre-Primary and Primary Education.

[9]. Pedagogical Institute: The Institution responsible for the In - Service Training of Teachers of Pre - Primary, Primary, and Secondary Education

[10]. Appendix 3. Lists distributed to the four judges to fill in.

TABLE 5 Judges by Length of Service and Institution

	Judges	Years of Service	Institution
1.	Judge "A"	20	Pedagogical Institute
2.	Judge "B"	23	Pedagogical Academy
3.	Judge "C"	18	Pedagogical Academy
4.	Judge "D"	24	Pedagogical Academy

The above mentioned Judges were asked to listen to the pupils' compositions on cassette tape and rank the ages of the children from what they heard. The only information given to the teachers about the recordings were: (a) The four age groups of children and (b) The theme of the project "contrasts". In addition, the judges were asked to fill in the distributed lists and justify their answers by writing their comments in a separate column. Table 6 gives the placing, by each of the three judges, of compositions and the relationship which exists between the actual ages of the children and the estimated ages as well as between the estimated age levels and the actual age levels set in the developmental spiral. The comments of the judges are set in a different column.[11]

[11] Appendix 4. Table 6. The Placing of Compositions and Comments of Judges.

Table 7 shows the judgements made for the compositions in columns of four variables, according to the age levels set in the developmental spiral.

TABLE 7 **The judgements made for the compositions in columns of four Variables**

Compositions	Judges				Actual Age Level
	A	B	C	D	
1	4	4	4	4	4
2	3	3	4	4	4
3	2	1	1	2	3
4	2	2	2	2	2
5	1	1	1	3	1
6	4	4	4	3	4
7	2	1	1	3	1
8	1	1	1	4	1
9	3	1	2	3	2
10	3	4	4	3	3
11	2	2	4	3	3
12	2	2	2	3	2
13	4	4	4	2	4
14	3	4	3	4	4

TABLE 7 **Continued**

Compositions	Judges				Actual Age Level
	A	B	C	D	
15	3	3	3	3	3
16	2	1	1	3	1
17	3	3	2	3	1
18	3	3	3	4	3
19	2	2	3	3	2
20	4	4	4	2	4
21	2	1	1	4	2
22	4	4	4	2	4
23	2	1	1	3	1
24	2	1	1	3	3
25	2	2	3	3	2
26	2	2	2	2	2
27	3	3	3	2	3
28	2	1	1	4	1

Spearman's rank correlation was used to measure the association between each judge's assignments of each composition into one of the four age categories and between these assignments and the actual age group of the children.

4. Results and Discussion

Table 8 gives consistently high correlations between the assignments of the three Cypriot judges, and between these assignments and the actual age groups of the composers. The fourth judge was discounted, because he appeared to function in a consistently negative manner, and had low levels of agreement with the others.

Although this Spearman's correlation which includes the actual age group as well as the particular judges is somewhat unusual way of using a rank correlation it is only included here to indicate something of the relationship between not only the judges but also the actual ages.

TABLE 8 **Spearman's rank correlation between age group assignments of each composition by each judge and actual age group of composer (N-28)**

Judges	1	2	3	4	Actual Age Group
1	1.000	0.840	0.776	-.170	0.769
2		1.000	0.887	-.047	0.771
3			1.000	-.118	0.802
4				1.000	-.115

TABLE 9 shows a correlation test between the four judges' assignments and between these assignments and the actual age group of the composers and the probabilities.

TABLE 9 **Probabilities**

Judges	Estimated Age Group				Actual Age Group
	1	2	3	4	
1	0.001	0.001	0.001	0.609	0.001
2		0.001	0.001	0.806	0.001
3			0.001	0.557	0.001
4					0.567

By removing the unreliable judge, these levels of agreement were high, and gave levels of significance of $P< 0.001$. The level of concordance coefficient between the ranking of the judgements of the remaining three was $W=0.889$ with a probability of $P < 0.001$ (Kendall's).

This is a highly significant result which provides convincing evidence that children respond to music according to their stages of development. This is the point

Swanwick is making then he says: "it is indeed possible to identify the ages of children from their musical compositions, with a high degree of confidence".[12]

The same cassette tape with the 28 compositions was later played by my supervisor Professor Keith Swanwick to eight (8) judges in United Kingdom, at the Institute of Education, University of London. These judges were primary and secondary music teachers on In-Service training programmes and on research degrees. They were first given time to be familiarised, to discuss and absorb the musical criteria, which have been directly derived from the modes of the musical developmental spiral. These "criteria statements", as Swanwick states, "have been derived and condensed from the descriptions of the modes of the developmental spiral. These were then used to assess the Cyprus compositions"[13]

The criteria for assessing compositions, as described by Professor Swanwick[14] in the Journal of the Society for Research in Psychology of Music and Music Education are as follows:

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[12] Swanwick Keith, (1991), Further Research on the Musical Development Sequence, Psychology of Music, Vol.19, No.1, p.27

[13]. Swanwick Keith, (1991), Musical Criticism and Musical Development, op. cit. p. 144.

[14] Swanwick Keith (1991), Further Research on the Musical Development Sequence, Psychology of Music, op. cit., pp. 28-29.

Criteria for Assessing Compositions

Level 1 - Sensory: There is evidence of pleasure in sound itself, particularly timbre and extremes of loud and soft. There may be exploration and experimentation with instruments. Organisation is spontaneous, possibly erratic, pulse is unsteady and radiations of tone colour appear to have no structural or expressive significance.

Level 2 - Manipulative: The handling of instruments shows some control and repetitions are possible. Regular pulse may appear along with technical devices suggested by the physical structure and layout of available instruments, such as glissandi, scalic and intervallic patterns, trills and tremolo. Compositions tend to be long and repetitive as the composer enjoys the feeling of managing the instrument.

Level 3 - Personal expressiveness: Expressiveness is apparent in changes of speed and loudness levels. There are signs of elementary phrases - musical gestures - which are not always able to be exactly repeated. There is drama, mood or atmosphere, perhaps with reference to an external "programmatic" idea. There will be little

structural control and the impression is of spontaneity without development of ideas.

Level 4 - Vernacular: Patterns appear - melodic and rhythmic figures that are able to be repeated. Pieces may be quite short and will work within established general musical conventions. Melodic phrases may fall into standard two, four or eight-bar units. Metrical organisation is common along with such devices as syncopation, melodic and rhythmic ostinato and sequences. Compositions will be fairly predictable and show influences of other musical experiences; singing, playing and listening.

Level 5 - Speculative: Compositions go beyond the deliberate repetition of patterns. Deviations and surprises occur, though perhaps not fully integrated into the piece. There is expressive characterisation which is subject to experimentation, exploring structural possibilities, seeking to contrast or vary established musical ideas. After establishing certain patterns a frequent device is to introduce a novel ending.

Level 6 - Idiomatic: Structural surprises are integrated into a recognisable style. Contrast and variation take place on the basis of

emulated models and clear idiomatic practices, frequently, though not always drawn from popular musical traditions. Harmonic and instrumental authenticity is important. Answering phrases, call and response, variation by elaboration and contrasting sections are common. Technical, expressive and structural control is demonstrated in longer compositions.

Level 7 - Symbolic: Technical mastery serves musical communication. Attention is focused on formal relationships and expressive character which are fused together in an impressive, coherent and original musical statement. Particular groups of timbres, turns of phrase and harmonic progression may be developed and given sustained concern. There is a strong sense of personal commitment.

Level 8 - Systematic: Beyond the qualities of the previous level, works may be based on sets of newly generated musical materials, such as scales and note rows, novel systems of harmonic generation, electronically created sounds or computer technology. The possibilities of musical discourse are systematically expanded.

Then the judges, without having any information on the recordings, except that there were four age groups of Cypriot children, 4-5, 7-8, 10-11 and 14-15, who worked on the project "contrast", were asked independently, after one hearing, to assign each of the 28 compositions to one of the criterion statements.

These were then used in the Spearman's rank correlation to measure the association between each judge's assignments of each composition into one of the criterion statements of the spiral and between these assignments and the actual age group of the children.

Table 10 gives consistently high correlations between the assignments of the seven U.K. judges, and between these assignments and the actual age group of the composers. As Professor Swanwick stated, "The eighth judge was discounted because of low levels of agreement with the others. He also had indicated that he found some difficulty with the task[15]".

[15] . Swanwick Keith, (1991), Psychology of Music, op. cit., p. 29.

TABLE 10 **Spearman's rank correlations between criterion assignments of each composition by each judge and actual age group of composer.**

Judge	1	2	3	4	5	6	7	Actual Age group
1	1.000	0.64	0.84	0.77	0.79	0.80	0.72	0.72
2		1.00	0.77	0.68	0.67	0.78	0.73	0.62
3			1.00	0.70	0.82	0.78	0.75	0.70
4				1.00	0.77	0.81	0.76	0.71
5					1.00	0.93	0.84	0.82
6						1.00	0.87	0.84
7							1.00	0.79

These levels of agreement were high and gave level of significance of $p < 0.001$. The levels of concordance coefficient between the ranking of the ratings by the seven judges was $W=0.809$ with a probability of $p < 0.001$ (Kendall's).

In order to compare the frequency of factors which fall into two different categories, namely between the actual age groups of children and the placing of compositions according to the spiral criteria, the chi-square(x^2) was used.

Table 11 shows the proportion of the 196 judgements made in each of the spiral criteria at each age group.

TABLE 11 **Spiral criteria against age groups.**

	SENS	MAN	PERS	VERN	SPEC	IDIOM	SYM
Age level	1	2	3	4	5	6	7
1	12	21	15	1	0	0	0
2	9	11	16	13	0	0	0
3	1	9	8	14	13	4	0
4	0	0	8	4	7	15	14

Professor Swanwick, in his article "Further Research on the Musical Development Sequence", states:

"On 18 degrees of freedom, a X^2 of 145.91 gives an associated probability of $p < 0.001$. We can therefore confidently assume that the sequence of developmental levels we originally mapped is reasonably accurate and that the overall theoretical frame work has considerable predictive power".[16]

Also fig. 3, which is in the same text, displays, as Swanwick accurately states, that

[16] Swanwick Keith (1991), Further Research on the Musical Development Sequence, Psychology of Music, op. cit., p. 30.

"the spiral modes arrive on cue exactly in the predicted sequence. The Sensory, Manipulative and Personal Expression levels are already in place by age 4-5; by age 7-8 the Vernacular is established; by 10-11 the Speculative appears; and compositions at age 14-15 show the first emergence of the Symbolic mode."[17]

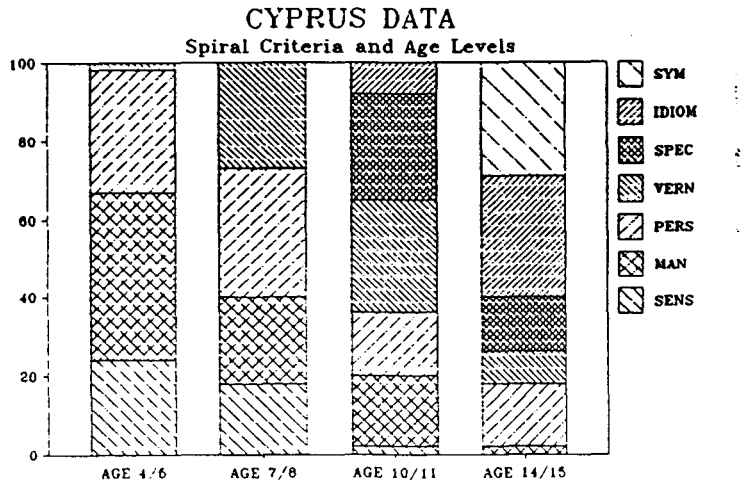


FIG. 3

Fig.3: The Spiral Modes in the Predicted Sequence.

Source: Swanwick Keith (1991), Further Research on the Musical Development Sequence, Psychology of Music, Vol. 19, No 1, 1991, p. 30.

[17] Ibid., p. 30.

Before embarking on the new experiment, further research was conducted in Cyprus in order to compare the significance of results, when assessing compositions without using criterion statements, but instead an unlabelled scale.

5. Further Research to Investigate the Relative Effectiveness of Criterion Statements Against an Unlabelled Scale.

The experiment was carried out by playing the same taped sample of the 28 compositions, that was used in the previous investigation to seven teacher judges in Cyprus. All of these judges had a university degree in Music and were on an In-Service programme at the Pedagogical Institute. However, these teachers had no experience on Swanwick-Tillman's spiral of musical development and were asked to place the 28 compositions on an unspecified scale from 1 to 8. Where 1 was the lowest level of performance and 8 was the highest. The Cyprus judges made their judgements independently after one hearing.

Table 12 shows the actual scores of each judge against the items of the 28 compositions.

TABLE 12 **Actual scores of each judge on the 28 compositions**

Item No.	1	2	3	4	5	6	7	Actual Age Level
1	4	3	5	6	4	5	5	4
2	6	2	6	7	8	7	7	4
3	5	5	7	5	6	4	6	3
4	3	3	5	2	4	3	3	2
5	4	4	4	3	3	3	3	1
6	7	2	4	8	7	7	8	4
7	2	1	4	1	4	2	2	1
8	2	1	3	2	2	1	1	1
9	3	2	5	6	4	2	2	2
10	6	3	6	7	8	7	6	3
11	5	4	7	8	7	5	5	3
12	1	2	4	2	5	4	1	2
13	8	8	8	8	8	8	8	4
14	3	2	5	3	3	4	4	4
15	7	4	6	7	8	6	7	3
16	6	2	6	5	6	5	6	1
17	3	1	5	3	7	4	4	1
18	8	6	6	7	7	7	5	3
19	2	1	5	2	4	3	2	2
20	8	7	7	8	8	8	8	4
21	3	2	4	5	5	4	3	2
22	7	1	6	8	8	8	7	4
23	3	4	5	2	5	3	6	1
24	7	6	6	4	8	6	5	3
25	1	2	5	3	3	3	1	2
26	2	2	5	1	4	3	4	2
27	3	1	6	4	7	5	3	3
28	2	2	5	2	2	3	2	1

These were then used in the Spearman's rank correlation to measure the association between each judge's assignments.

TABLE 13 **Spearman's rank correlations between scale mark assignments of each composition by each judge.**

	1	2	3	4	5	6	7
1	1.000	0.609	0.697	0.846	0.787	0.852	0.876
2		1.000	0.523	0.419	0.357	0.408	0.509
3			1.000	0.651	0.748	0.688	0.673
4				1.000	0.725	0.834	0.744
5					1.000	0.866	0.779
6						1.000	0.818
7							1.000

Table 14 gives the probabilities.

TABLE 14 Probabilities

	1	2	3	4	5	6	7
1	0.001	0.001	0.001	0.001	0.001	0.001	0.001
2		0.0001	0.004	0.025	0.059	0.030	0.006
3			0.001	0.001	0.001	0.001	0.001
4				0.001	0.001	0.001	0.001
5					0.001	0.001	0.001
6						0.001	0.001
7							0.001

These levels of agreement are high, and give levels of significance of $p<0.001$. The level of concordance coefficient between the ranking of the seven judges is $w=0.731$, with a probability of $p<0.001$.

The relationship between the actual age groups of children and the placing of their compositions according to the scale marks was analysed by chi-square (x^2).

Table 15 shows the proportion of the judgements made in each of the scale marks at each age group.

TABLE 15 **Scale marks against age groups**

Age Groups	1	2	3	4	5	6	7	8
1	6	13	10	8	6	5	1	0
2	6	13	12	9	8	1	0	0
3	1	0	3	5	9	13	13	5
4	1	3	4	5	4	4	10	18

On 21 degrees of freedom, a x^2 of 113.51 gives an associated probability of $p<0.001$. In this case the full range of the eight point scale was used, where in the original research the 8th criterion statement was not felt to be appropriate.

These results appear to show that the judges were just as able to put in rank order the compositions of children on an unspecified scale from 1-8 as they were able on a scale attached to eight criterion statements, used in the original study.

Therefore, when using an unlabelled scale, judges agree that there are differences between children's compositions at different age levels, and they are able to rank children's compositions with a strong inter-judge consensus. The levels of concordance coefficient between the ranking of the ratings by the seven judges is $W=0.731$, with a probability of $p<0.001$.

The levels of agreement were also high when criterion statements were used. The levels of concordance coefficient between the ranking of the ratings by the seven judges was $W=0.809$ with a probability of $p<0.001$.

These findings provide convincing evidence that there is a certain development of children's response to music which moves in parallel with their stages of maturation.Also there is still a lot of inter-judge agreement even when criterion statements are available. This suggests that the hierarchical ordering of the criterion statements has substance and may be considered as a valid way of describing and assessing the differences between children's compositions.

These criterion statements, which are dependent on the recognition of qualitative differences rather than on quantitative shifts, will serve as a tool for analysing and explaining intuitive judgements, because they provide an objective evidence of pupils' attainment and progress. For these reasons criterion statements provide the special prerequisite for future practical purposes, because they form the framework of what may be demanded and assessed at a specific age of children's musical development.

Furthermore, the criterion statements are perhaps more valuable in cases where only a few, perhaps one or two compositions are being assessed and the judges do not have the benefit of comparison as a basis for judgement.

Even though experienced teachers were used in this particular phase of the research and were able to make judgements without the benefit of criterion statements, these

criteria can serve as an effective tool for teachers and should be included in their pre-service and in-service training programmes, because they will better enable them to make confident judgements of pupil's musical achievements.

In summary, then, criterion statements provide an effective and objective tool for assessing pupils' attainment and progress demanded at specific ages throughout their musical education and at the same time enable teachers in providing the proper kinds of learning opportunities for children's musical development.

These findings tell us that the sequential order of musical development has been re-discovered in the Cyprus data, so the researcher is ready to use the spiral of musical development as the instrument of assessment in his new experiment, because it is reliable.

CHAPTER 7

THE NEW EXPERIMENT

1. Introduction

After the replication of the original study in Cyprus, which has given supportive results, the researcher has conducted further research in Cyprus during April and May of 1991 to investigate the extent to which audience listening might influence composing. Although it is assumed that the experience of audience-listening might develop one's ability in composing, this area has not been investigated yet. So by using the Swanwick-Tillman musical developmental model as the instrument of assessment and, specifically, the criteria for assessing children's compositions derived and condensed from the model as a reliable indicator, we have conducted further research in Cyprus to investigate to what extent audience - listening may influence composing.

2. Research Methodology

2.1 Collection of Data

The target populations of the study were children randomly selected from the following age groups:

- four to five;
- eight to nine;
- eleven to twelve;
- fourteen to fifteen years of age.

The research was carried out in the following four (4) schools where musical materials and facilities were available and where more than one section in each grade existed:

- Kinoniki Merimna, Kindergarten
- Ayios Andreas, Primary school for lower grades
- Strovolos "A", Primary school for higher grades
- Acropolis "B", Gymnasium

The above mentioned schools were selected from the same urban area (Nicosia), so that their environment was, for the purpose of this research, more homogeneous.

From each school two groups of pupils were involved. One group was the experimental and the other was used as the control group. Each group consisted of ten pupils randomly selected by using a table of random numbers[1].

Four (4) teachers participated in the experiment. Three (3) of the teachers were music specialists and the fourth one, primarily for the kindergarten, was a qualified teacher, but not a specialist in music.

A set including written information and a cassette tape was developed and provided by the researcher for each teacher involved in the experiment. Visits by the researcher to the schools provided the opportunity to discuss various problems concerning the project and clarify matters.

On the cassette tape there was recorded the following two examples which were related to the project "Contrasts".

- Norwegian Dance No2, by Edward Grieg.
- "Two Polish Jews" from the Pictures at an Exhibition, by Modest Mussorgsky.

[1] Appendix 5. Abridged from Table xxxiii of Fisher and Yates, Statistical Tables for Biological, Agricultural and Medical Research, Published by Longman Group Ltd., London.

For the collection of data, the researcher used the Post-test - only Control Group Design[2]. Its form is the following:

R	X	O
R		O

The listening activities X were assigned to the Experimental Group which was randomly selected.

The written information provided by the researcher to each teacher involved in the experiment was as follows:

1. Two groups of pupils will participate in the project: The Experimental and the Control Group.

2. Four age categories will be involved in the project:
   2.1 Four to five;
   2.2 Eight to nine;
   2.3 Eleven to twelve;
   2.4 Fourteen to fifteen

[2]. Campbell Donald T. and Stanley Julian C. (1963) Experimental and Quasi-Experimental Designs for Research, Houghton Mifflin Company, U.S.A., p. 25.

3. The time allotted for composition each time and for each group is as follows:

3.1 Four to Five years old

- eight minutes;

3.2 Eight to nine years old

- twelve minutes;

3.3 Eleven to twelve years old

- sixteen minutes;

3.4 Fourteen to fifteen years old

- twenty minutes;

4. Each age group will be given two opportunities for composition.

5. The selection of the experimental and the control group from each age group, where more than two sections exist for the grades involved in the experiment, will be made by using the drum technique.

6. According to the name lists of each grade and by using the table of random numbers, which is submitted[3], five boys and five girls from each section involved in the experiment, will be selected.

[3]. Appendix 5.

7. The experimental group will listen to the extracts on the submitted tape, four times, without giving them any information about the recordings, but presenting the music in such a way as to make it appear a sensible activity.

8. The pupils of the experimental group will be asked to select instruments and compose music according to the time allotted to their age groups. They will be given two opportunities for composition and after that, each child will be asked to record the outcome on a cassette tape.

9. The pupils of the control group, without any prior listening will also be asked to select instruments and compose music based on the curriculum project "contrasts" (slow-fast, high- low, loud-soft etc.) according to the time allotted to their age group.
They will be given two opportunities for composition, and after that each child will be asked to record the outcome on a cassette tape.

10. It is preferable that each child will write his/her own composition. Apart from the conventional notation, he/she can also use personal, graphic or pictorial notations.

To gain a broader view of the situation, a questionnaire was administered to the teachers to fill in[4].

[4]. Appendix 6. Questionnaire distributed to the teachers to fill in.

Table 16 shows the number list of the forty (40) pupils of the Experimental Group by the name of their school, their age group, their sex and the series of their compositions as shown on the collected cassette tapes.[5]

[5] Appendix 7. Numbered list of pupils of the Experimental Group by School, Age, Sex and the Series of Composition on the Cassette tape.

The prepared list of the names of the forty (40) pupils of the experimental group was used to select, at random, four names from each of the four age groups by using the table of random numbers. (Abridged from table xxxiii of Fisher and Yates.)

Table 17 shows the sixteen pupils selected at random from each age group, by age and sex.

TABLE 17 **Sixteen (16) Pupils Selected at Random from each Age-Group by Age and Sex**

1. AGE GROUP 4 - 5

SN	Pupils	Age		Sex
		yrs	mth	
1	Pupil "I"	5		M
2	Pupil "F"	5		F
3	Pupil "B"	5		F
4	Pupil "G"	5		M

2. AGE GROUP 8 - 9

SN	Pupils	Age		Sex
		yrs	mth	
5	Pupil "F"	8		F
6	Pupil "J"	8		M
7	Pupil "G"	8	6	M
8	Pupil "A"	8		F

TABLE 17 **Continued**

3. AGE GROUP 11 - 12

SN	Pupils	Age		Sex
		yrs	mth	
9	Pupil "B"	11		M
10	Pupil "C"	11	6	M
11	Pupil "F"	11	6	F
12	Pupil "G"	11	6	F

4. AGE GROUP 14 - 15

SN	Pupils	Age		Sex
		yrs	mth	
13	Pupil "A"	14	6	M
14	Pupil "J"	15		F
15	Pupil "G"	14		F
16	Pupil "D"	15		M

Then, the researcher, by using the table of random numbers, prepared and numbered a list of sixteen (16) pupils by school, age and sex, as well as an edited tape recording with their items of composition assembled in random order. (The examples on cassette tape No. 3 accompany this study).

Table 18 shows the final selection of the pupils of the experimental group by school, age and sex.

TABLE 18 **Sixteen (16) Pupils of the Experimental Group by School, Age and Sex**

SN	Pupils	School	Age		Sex
			yrs	mth	
1	Pupil "B"	Strovolos A	11		M
2	Pupil "J"	Aghios Andreas	8		M
3	Pupil "F"	Kinoniki Merimna	5		F
4	Pupil "G"	Aghios Andreas	8	6	M
5	Pupil "G"	Strovolos A	11	6	F
6	Pupil "C"	Strovolos A	11	6	M
7	Pupil "I"	Kinoniki Merimna	5		M
8	Pupil "B"	Kinoniki Merimna	5		F
9	Pupil "G"	Akropolis Gymn.	14		F
10	Pupil "F"	Strovolos A	11	6	F
11	Pupil "A"	Akropolis Gymn.	14	6	M
12	Pupil "G"	Kinoniki Merimna	5		M
13	Pupil "D"	Akropolis Gymn.	15		M
14	Pupil "A"	Aghios Andreas	8		F
15	Pupil "J"	Akropolis Gymn.	15		F
16	Pupil "F"	Aghios Andreas	8		F

Table 19 shows the numbered list of the names of the forty (40) pupils of the Control Group by the name of their school, age-group, sex and the series of composition as shown on the collected cassette tapes.[6]

[6] Appendix 8. Table 19. Numbered List of Pupils of the Control Group by School, Age, Sex and the Series of Composition on the Cassette Tape.

The prepared list of the names of the forty (40) pupils of the control group was used to select, at random, four names from each of the four age groups by using the tables of random numbers. (Abridged from Table xxxiii of Fisher and Yates).

Table 20 shows the sixteen (16) pupils, selected at random, from each age group, by age and sex.

TABLE 20 **Sixteen (16) Pupils Selected at Random from each Age Group by Age and Sex**

1. AGE GROUP 4 - 5

SN	Pupils	Age		Sex
		yrs	mth	
1	Pupil "I"	5		M
2	Pupil "F"	4	7	F
3	Pupil "B"	5	6	F
4	Pupil "G"	5	4	M

2. AGE GROUP 8 - 9

SN	Pupils	Age		Sex
		yrs	mth	
5	Pupil "F"	8		M
6	Pupil "J"	8		F
7	Pupil "G"	8		M
8	Pupil "A"	8		F

TABLE 20 **Continued**

3. AGE GROUP 11 - 12

SN	Pupils	Age		Sex
		yrs	mth	
9	Pupil "B"	12		F
10	Pupil "G"	11	6	M
11	Pupil "C"	12		F
12	Pupil "F"	12		M

4. AGE GROUP 14 - 15

SN	Pupils	Age		Sex
		yrs	mth	
13	Pupil "F"	14		F
14	Pupil "G"	14		F
15	Pupil "A"	14		M
16	Pupil "D"	14		M

Then the researcher, by using the table of random numbers, prepared a numbered list of sixteen (16) pupils by school, age and sex, as well as an edited tape recording with their items of composition assembled in random order. (The examples on cassette tape No 4 accompany this study).

TABLE 21 **Sixteen (16) pupils of the Control Group by School, Age, and Sex**

SN	Pupils	School	Age		Sex
			yrs	mth	
1	Pupil "B"	Strovolos A	12		F
2	Pupil "J"	Aghios Andreas	8		F
3	Pupil "F"	Kinoniki Merimna	4	7	F
4	Pupil "G"	Aghios Andreas	8		M
5	Pupil "F"	Strovolos A	12		M
6	Pupil "G"	Strovolos A	11	6	M
7	Pupil "I"	Kinoniki Merimna	5		M
8	Pupil "B"	Kinoniki Merimna	5	6	F
9	Pupil "A"	Akropolis Gymn.	14		M
10	Pupil "C"	Strovolos A	12		F
11	Pupil "F"	Akropolis Gymn.	14		F
12	Pupil "G"	Kinoniki Merimna	5	4	M
13	Pupil "D"	Akropolis Cymn.	14		M
14	Pupil "A"	Aghios Andreas	8		F
15	Pupil "G"	Akropolis Gymn.	14		F
16	Pupil "F"	Aghios Andreas	8		M

The assessment of the thirty two (32) compositions, sixteen (16) from the experimental group and sixteen (16) from the control group, was carried out by nine (9) independent judges. These judges were introduced by the researcher to the spiral criterion statements derived from the modes of the musical developmental model. In various training sessions they discussed and absorbed them and they became acquainted with how to use them.

The first three judges, according to the Table 22 were the music teachers working at the Pedagogical Institute and the Pedagogical Academy, and were involved by the researcher in judging children's compositions during the period of the replication of the musical developmental model in Cyprus. The fourth judge, who was functioning in a consistently negative manner in the previous experiment, was replaced by another music teacher working at the Pedagogical Academy. The remaining five judges were the members of the team for Music Curriculum for Primary Education in Cyprus. One member of the team was a Music Inspector for Primary Education and the other four members were Deputy Headteachers working as music specialists in Primary Education.

Table 22 shows the judges, their length of service and post held.

TABLE 22 **The Judges by length of service and post held.**

SN	Judges	Years of Service	Post held
1	Judge "A"	21	Pedagogical Institute
2	Judge "B"	24	Pedagogical Academy
3	Judge "C"	19	Pedagogical Academy
4	Judge "D"	32	Pedagogical Academy
5	Judge "E"	35	Inspector of Music for Primary Education
6	Judge "F"	28	Deputy Head Primary Education (Music Specialist)
7	Judge "G"	36	Deputy Head Primary Education (Music Specialist)
8	Judge "H"	28	Deputy Head Primary Education (Music Specialist)
9	Judge "I"	**32**	Deputy Head Primary Education (Music Specialist)

At various training sessions the judges were given time to absorb, discuss and make sure how to use the criterion statements for assessing children's compositions. For the needs of the present research the criteria for assessing composition were translated into Greek to facilitate the judges understanding of their meaning[7]. The criteria for assessing composition, which were used for the purpose of this study were those referred to in the article "Further Research on the Musical Development Sequence" by Professor Keith Swanwick[8] and were also used by the U.K. judges in assessing Cypriot children's compositions.

Before embarking on their main task, of the assessment of the thirty two (32) compositions, the judges were given the opportunity to assess two or three musical compositions, from those which were not included in the sample, by using the criterion statements. The discussion between them and the reflection on this experience gave them more confidence in assessing the musical creative work of the children.

Then the judges, working independently without discussion, after one hearing, were asked to assign each composition to one of the criterion statements, which they had access to both in English and in Greek and used to assess the compositions. The work was completed in two sessions. In the first session the judges worked on the compositions of Group 1 and in the second on those of Group 2. The judges were given some time between each item for musical perception, and reflection on each

[7] Appendix 9. Criteria for Assessing Composition Translated into Greek.
[8] Swanwick Keith (1991), Futher Research on the Musical Development Sequence, Psychology of Music, vol.19,No.1, pp.28-29.

composition and the criteria for assessing the compositions. Two tables were administered to the judges to record their decisions[9].

3. Analysis of the Data

To analyse the collected data the researcher prepared two tables. One table for the experimental group and another for the control group, with the judges along the top and the items down the left hand side. The actual scores of each judge are shown on a scale of 1-8, where "sensory"=1 and "systematic"=8.

[9]. Appendix 10. Judgements to Criterion Assignment of Each Composition, Group 1 and Group 2.

Table 23 shows the actual scores of each judge against the items of compositions on the control group.

TABLE 23 Actual scores of each judge on the control group.

Item. No	1	2	3	4	5	6	7	8	9
1	4	5	4	5	4	5	4	4	4
2	3	4	2	2	2	4	3	3	3
3	1	1	1	1	3	3	2	1	2
4	3	4	5	5	3	4	3	4	4
5	5	4	4	4	4	4	4	5	4
6	5	5	6	5	4	4	4	4	5
7	2	2	2	2	1	2	3	3	3
8	1	3	2	1	3	3	2	4	3
9	4	6	6	6	4	4	6	5	5
10	4	5	5	4	5	5	5	6	4
11	4	5	4	4	5	5	3	4	4
12	1	3	1	1	4	1	3	1	3
13	5	5	4	3	5	4	5	4	4
14	4	4	4	4	4	3	4	5	5
15	5	6	7	6	6	7	5	5	6
16	1	4	4	4	5	3	4	4	4

Table 24 shows the actual scores of each judge against the items of compositions on the experimental group.

TABLE 24 **Actual scores of each judge on the experimental group.**

Item. No	1	2	3	4	5	6	7	8	9
1	4	4	5	5	5	6	4	4	5
2	5	5	5	4	4	5	5	5	4
3	1	2	3	2	3	2	3	2	2
4	4	4	4	3	5	4	4	3	5
5	6	6	5	6	5	5	6	5	5
6	4	7	5	5	6	5	5	5	6
7	1	2	3	1	3	2	3	2	3
8	1	3	1	3	2	3	3	3	3
9	7	7	7	7	7	5	6	5	5
10	5	7	7	7	6	6	5	5	5
11	7	7	7	7	5	5	6	5	6
12	1	2	2	2	3	3	3	4	3
13	7	6	6	5	6	5	7	5	5
14	4	3	4	4	5	4	4	4	4
15	5	6	6	5	7	5	6	7	7
16	4	5	4	4	5	3	4	4	4

For the purpose of further analysis of these scores we have used Spearman's correlation test.

Table 25 gives Spearman's rank correlation on the experimental group's scores between 9 of these judges' assignments of compositions into the criteria of the musical developmental model ranked in ascending order, "sensory"=1 to "systematic"=8.

TABLE 25: Spearman's correlation matrix between criterion assignments of each composition on the experimental group's scores. (N=16)

	1	2	3	4	5	6	7	8	9
1	1.000	0.833	0.909	0.863	0.726	0.720	0.963	0.822	0.714
2		1.000	0.897	0.919	0.809	0.759	0.854	0.838	0.831
3			1.000	0.920	0.830	0.836	0.887	0.830	0.803
4				1.000	0.769	0.852	0.839	0.806	0.783
5					1.000	0.689	0.799	0.761	0.828
6						1.000	0.721	0.762	0.761
7							1.000	0.891	0.801
8								1.000	0.799
9									1.000

Table 26 shows a correlation test between the 9 judges on the experimental group's scores and the probabilities.

TABLE 26 Probabilities (N=16)

	1	2	3	4	5	6	7	8	9
1	0.001	0.001	0.001	0.001	0.002	0.002	-.001	0.001	0.002
2		0.001	0.001	0.001	0.001	0.001	0.001	0.001	0.001
3			0.001	0.001	0.001	0.001	0.001	0.001	0.001
4				0.001	0.003	0.001	0.001	0.001	0.001
5					0.001	0.003	0.001	0.001	0.001
6						0.001	0.002	0.001	0.001
7							0.001	0.001	0.001
8								0.001	0.001
9									0.001

The above two tables show consistently high correlations between 9 of these judges. All levels of significance on the experimental group's scores are of the order $p < 0.002$ and the level of concordance coefficient between the 9 judges is $W=0.837$, at associated probability < 0.001.

In order to analyse the scores of the control group Spearman's correlation test was used again.

Table 27 gives Spearman's rank correlation of the control group's scores between 9 of these judges' assignments of compositions into the criteria of the musical developmental model ranked in ascending order, "sensory"=1 to "systematic"=8.

TABLE 27 **Spearman's correlation matrix between criterion assignments of each composition on the control group's scores (N=16).**

	1	2	3	4	5	6	7	8	9
1	1.000	0.757	0.701	0.632	0.511	0.690	0.706	0.631	0.741
2		1.000	0.845	0.811	0.690	0.824	0.815	0.659	0.811
3			1.000	0.925	0.545	0.686	0.753	0.761	0.902
4				1.000	0.443	0.673	0.685	0.656	0.878
5					1.000	0.539	0.676	0.558	0.613
6						1.000	0.513	0.559	0.542
7							1.000	0.744	0.782
8								1.000	0.768
9									1.000

Table 28 shows a correlation test between the 9 judges on the control group's scores and the probabilities.

TABLE 28 Probabilities (N=16)

	1	2	3	4	5	6	7	8	9
1	0.001	0.001	0.003	0.008	0.041	0.003	0.002	0.009	0.001
2		0.001	0.001	0.001	0.003	0.001	0.001	0.005	0.001
3			0.001	0.001	0.028	0.003	0.001	0.001	0.001
4				0.001	0.083	0.004	0.003	0.006	0.001
5					0.001	0.030	0.004	0.024	0.011
6						0.001	0.040	0.023	0.029
7							0.001	0.001	0.001
8								0.001	0.001
9									0.001

The above two tables show high correlation between 9 of the judges on the control group. All levels of significance on the control group's scores are of the order of $P < 0.001$ except one < 0.083 and the level of concordance coefficient between the 9 judges is $W=0.729$, at associated probability < 0.001

The relationship between the experimental group and the control group and the placing of compositions according to the spiral criteria was analysed by using chi-square (X^2).

Table 29 shows the proportion of 288 judgements made on each of the spiral criteria on the experimental and control groups.

TABLE 29 **Nine judges place 16 compositions of the experimental and control groups**

	EXPERIMENTAL	CONTROL
SENSORY	6	13
MANIPULATIVE	12	9
PERSONAL	21	25
VERNACULAR	27	55
SPECULATIVE	42	30
IDIOMATIC	18	10
SYMBOLIC	18	2

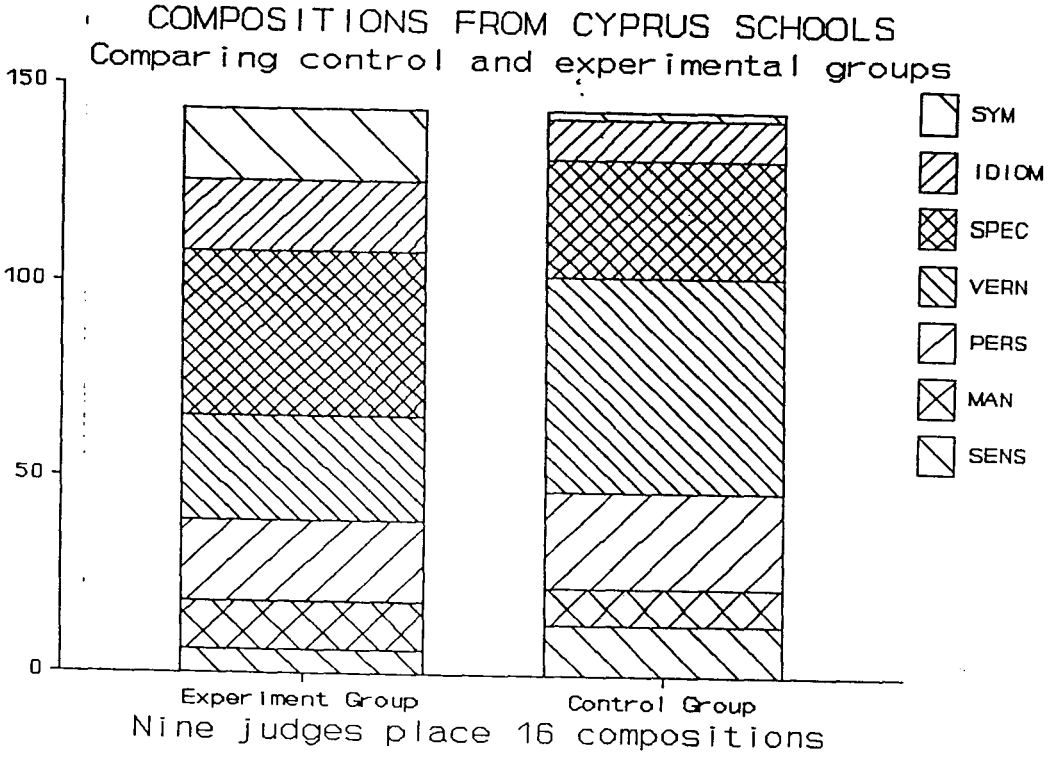
Chi-square = 30.00; $P < 0.0001$

On 6 degrees of freedom, a X^2 of 30.00 gives an associated probability of $P < 0.0001$.

Now taking into account the judges' agreement between the two groups and the significant difference between the experimental group $W = 0.837$, and the control group $W = 0.729$, we can confidently assume that the experience in audience - listening influences composing.

Fig. 4 shows the proportion of 288 judgements made in each of the modes of the musical developmental spiral both on control and experimental groups.

Fig. 4 Compositions from Cyprus schools comparing control and experimental groups.



It can be seen that although the modes of the musical developmental model in both the experimental and control groups arrive in cue in the predicted sequence, there are qualitative differences between these two sets of data.

The children in the control group appear to show lower level of achievement according to the criteria for assessing composition in the symbolic, idiomatic and speculative modes while they are more confident in the vernacular, personal and sensory modes.

The greater fluency of the children on the experimental group in the higher modes of the spiral, i.e. speculative, idiomatic and symbolic, it is due perhaps to the fact they were influenced by their engagement in audience-listening activities.

According to this analysis we can assume that the experience in audience-listening influences composing, and the data suggests that we can anticipate more confidence in the higher modes of the musical developmental mode. As such, these findings are a contribution to empirical work in an area in which much remains to be explored in terms of interaction of audience - listening and other musical activities.

PART FOUR

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

CHAPTER 8

CONCLUSIONS, IMPLICATIONS AND RECOMMENDATIONS

1.Introduction

As a result of this study it is hoped that the researcher through theoretical support and practical experiment and research work has brought into attention that the experience in audience-listening influences composing especially in the higher modes of the Swanwick Tillman's musical developmental model.

This has been attained through synthesizing relevant knowledge derived from music psychology, cognitive psychology, music education, arts education and other contributory areas of study as well as by carrying out a practical experiment. One of our greatest concerns throughout this study has been to make a contribution towards the development of music education in primary, secondary and higher education mainly in Cyprus at a time in which Cypriot society was faced with political, social, economical and cultural change. Also this study might be said to be an attempt to examine issues on music education on a rationale derived from development theory.

2. Connections between Theory and Practice

The fact that schools should be a microcosm of the outside world urges us to work in a new music learning environment, in which students become competent in the musical area through those activities in which people are involved with music in the outside world. And these activities, which prepare students gradually to become musical adults are composing, audience-listening and performing, functioning in an

integrated and interrelated way. This kind of approach requires a different preparation from traditional music programmes and aims to develop the mind which is considered fundamental in music education. This relates to chapter four of this thesis where we have discussed the psychological therories which show how the mental activities involved in the processing of musical stimuli infuence the relationship between audience - listening and composing and have developed a model to represent them. In order for these processes (See Figure 1) to take place it is the responsibility of music educators to recognise their importance and apply them in music education.

As we have mentioned previously we deal with music education by using three different but overlapping activities those of audience listening, performing and composing. Although the idea of the interrelation and integration of the musical activities has support in the literature on music education, as referred to in Chapter Three of this thesis, my aim in this study was to investigate the relationship between audience listening and composing by synthesizing relevant knowledge derived from various psychological theories and to test the hypothesis that audience - listening might have effects on the children's development as composers. From the analysis of the data, we have seen that experience in audience - listening influences composing, with marked difference between the compositions of the experimental and control groups in the higher modes of the developmental spiral. Furthermore the analysis of our model on page 91 of this thesis reinforces the idea that there is an interrelation between audience - listening and composing which is structured in ways which show an interaction between assimilation and

accommodation. According to our model, ideas from audience - listening can be assimilated and accommodated into the processes of compositional work with positive outcomes. These positive outcomes suggest that further investigation from the reverse angle of how composing and/or performing affects audience - listening perception would certainly be worthwhile. These links reveal the reciprocal nature of the musical activities and recognise the interrelation of audience-listening, composing and performing activities. So, the responsibility of music education is to enhance the interaction between assimilation and accommodation in music teaching and learning of any musical discourse at every level.

In order to approach this work and make it more effective, demands must be made on the pupils to take a more active role and the teachers have to develop ways which increase the listeners' understanding and their mental representation of listening. Listening to music requires active mental searching and this implies that we choose which elements to focus on. The range of choice may be enhanced by practical engagement and the focus made sharper.

Pupils should select, attend to and perceive, not only in audience - listening, but also in performing - listening and composing - listening. In each of these listening is central. Listening is at the heart of music education, is encountered in practice every day and plays a supportive role in musical thinking. Given the complexity and the richness of the musical stimuli which happen over a temporal continuum it is important that pupils are helped to select information which is pertinent to the task at hand and then to give concentrated attention. These processes will

gradually increase pupils' abilities to perceive musical events and should be a priority of music education. As music educators making practical application of the processes of perception it is necessary to keep in mind that auditory memory and auditory imagery play an important role. The recognition of the relationships between and among musical events can occur if pupils are able to recall previous musical events. Therefore it is important to educate the musical memory systems of the pupils so that they can store past musical events and felt experiences and transfer them in various musical activities.

Equally important in music education is to assist the development of the auditory imagery of the pupils so that they can relive music through mental representation of specific musical events. This process should be applied at different times in teaching music by connecting the three interrelated activities of composing, audience -listening and performing. Through this approach pupils are encouraged to recall past musical actions, events and experiences gained in one activity and transfer them to others, a way which helps them to discover how music works, a matter which has important implications on their musical development.

Dealing with musical activities in schools is in some way like looking in a prism. Although we can observe its light, we should be able to view it from different angles so that we can appreciate its multiplicity of faceted effects. This can be applied equally well to musical activities which can give us immense beauty through the perception of musical compositions or musical excerpts from a gestalt holistic approach, because music is more than its parts, but an analytical approach is

necessary as well, because our perception of music is enhanced by attending to musical variables and details experienced in musical works as stimuli.

These ways gradually develop in pupils a sensitive understanding of music and facilitate its mental representation, a valuable process through which pupils conserve past musical experiences and apply them in the same or other musical activities. As we have mentioned in Chapter Four of this thesis, although these processes are not observable we can trace convincing evidence of them in pupils' musical activities. These activities are skilled behaviours which are learned, so it is the responsibility of music education to realise their importance and apply them, through teaching in ways which reinforce one another, so that experiences gained in one musical activity develop understanding in the others.

Towards teaching these skills the processes of imitation and rehearsal should be applied constantly. Imitation is a device which is used in every day practice in music education and perhaps throughout our lives as musicians. It is part of the development and acquisition of musical skills. Rehearsal is equally important activity in music education and while it can take place externally in the traditional sense, it is just as imperative that pupils be encouraged to rehearse internally, as composer - listeners, audience - listeners and performer - listeners, because it is a vital part of their musical development. Through mental rehearsal pupils develop their musical skills and increase their auditory memories. So it becomes the responsibility of music education to give opportunities for pupils to rehearse internally musical images in order to maximise their abilities to store and recall

them from their auditory memories. Composing is an active way of rehearsing and constructing images. These images also have their origin partly in the accommodatory activity of audience - listening.

Approaching music education with this attitude, we should take into consideration the following factors, which play an important role in the whole effort of education through music and affect its development.

3. Curriculum Development

A study which is conceived in the wider sense with different organisation, structure, processes of learning and psychological theories all these have implications for music curriculum planning and development. The organisation of a viable music programme, which can contribute to intellectual, emotional, sensory-motor and social development, should encompass processes of learning based on sound psychological theories, functioning in a stimulating musical environment, which encourages students towards creativity and self expression.

Traditional music curricula are mainly based on the formulation of behaviourial or performance objectives advocated by Mager (1975) and Bloom at al. (1964). The classic formulation given by Mager was in the first instance to specify the behaviour, afterwards to set the conditions and in the final part to predetermine evaluation criteria based on the stated behaviourial objectives. This is the point Stenhouse is making when he says:

> "The model offered to designers is broadly as follows: agree broad aims and analyze these into objectives;construct a curriculum to achieve these objectives; refine it in practice by testing its capacity to achieve its objectives; communicate it to teachers through (among other things) the conceptual framework of objectives".[1]

The programme of music education in Cyprus has been built on this premise of behavioural objectives. Against this model of music educational practices there are various objections. One is that the fragmented view of musical knowledge prevents students from gaining insights necessary for true musical development. Stenhouse reinforces this point when he says: "Knowledge is primarily concerned with synthesis. The analytic approach implied in the objectives model readily trivializes it."[2]
Another obvious worry about the objectives model as Swanwick states: "... is that formulating objectives trivializes the activity; focusing our attention on those things which can be easily observed, distracting us from more important but less obvious outcomes..."[3] And the outcomes of artistic activities are unpredictable, related more to sensitivity and aesthetic appreciation.

A further worry about the formulation of behaviourial objectives is the loss of flexibility which prevents the development of student's own musicality and fulfilment of his expressive needs. Such an approach prevents the processes of Figure 1 from taking place, because behavioural objectives do not leave enough space for dialectic between assimilation and accommodation, and they do not allow for considerable

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[1]. Stenhouse, Lawrence (1975), An Introduction to Curriculum Research and Development, London Heinemann, p.72.

[2]. Ibid p.83.

[3]. Swanwick, Keith (1988), Music, Mind and Education, Routledge, London, p.125.

flexibility for children to come to equilibrium for themselves. At all times in music education it is important to remember that we cannot directly instruct, but instead facilitate interactive approaches in the music classroom and encourage responses which make music live. Considerable flexibility is necessary to this approach and plays an important part in the break from traditional quantitative approaches to qualitative differences in musical responses. Much of this is dependent on the appropriate teaching style, which should be related to individuals' learning styles according to their stages of development. These individual differences may explain the differences in effort and the time required for assimilation, acccommodation and equilibration of musical events. As Swanwick states:

> "Musical discourse at any level depends upon the fusion of both sides (assimilation and accommodation) and when we perceive a perfect equilibrium we speak of "perfection" of "quality". And this "quality" can be achieved by any person in any layer ...".[4]

It might be also said that the objectives model is somehow undemocratic because the students have no say in planning the "classification and framing of knowledge".[5]

The above mentioned objections to the formulation of behaviourial objectives urge for the need of replanning the music curriculum, which should consist of sound-sets of synthesizing knowledge, skills and attitudes and serving student's own musicality. By working on sets of sound we will give children the sense of the whole than on working on isolated concepts, which are fragments of the total experience insufficient

[4] Swanwick, Keith, (1994), Musical Knowledge, Intuition, analysis and music education, Routledge, p.98
[5]. Ibid, p.126

for musical progression. By choosing sets of sound, which have musical potential and organised in small projects three interrelated musical activities of composing, audience-listening and performing will take children through a sequence of musical experiences and satisfy their individual aspirations. With such an approach the curriculum will become modular and sequential, a point which Swanwick is making when he says

> "...each set of sound, though in itself the germ of a module, is progressively related to those experienced before and after. And within each module there is also a sequence of development and progression."[6]

This development and progression will be identified in learning outcomes related to qualitative rather than quantitative differences of musical encounters, For those pupils who will be engaged in one or more musical activities. And the central musical activities are of utmost importance in the organisation of the curriculum projects. A distinctive contribution which has to be made in such a music curriculum is to identify sets of sound, like the idea of contrasts used in the new experiment of this thesis, which can be experienced through all the layers of the Swanwick - Tillman's spiral of musical development by using the three inter-related activities those of composing, audience - listening and performing. This approach will provide children with unique musical knowledge and real musical experiences which will be vital to their further active engagement with music.

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[6]. Ibid,pp. 148-149

Finally, it might be said that pupils should also have a say in their musical development and progression, something which will make their assessment more fair and meaningful.

4. Assessment and Evaluation.

Another important area of music teaching which is relatively neglected is assessment and evaluation. Assessment is concerned according to Hargreaves "... with the measurement of aptitude for, achievement in, and attitudes towards music by means of standardised tests..."[7] Whilst the concept of evaluation in North America as Hargreaves states elsewhere in the same text, is broader that the idea of assessment "it encompasses the methods and curriculum of music instruction as well as the progress of the individual student."[8] In the behavioural objectives approach appropriate means are used for evaluating all aspects of musical growth knowledges, skills, cognitive thought processes, attitudes and values. In addition to testing devices, a variety of evaluative techniques are used and include: observations, interviews, discussions, check lists, performance activities, attitude scales, student reports and aural analysis. Perhaps the more consistent criticism generated against the objective-type of evaluation is that it assesses without understanding the educational process. This is the point Stenhouse is making when he says:

> "In short, in order to evaluate one must understand. It can be argued that conventional objective-type evaluations do not address themselves to understanding of success or failure. But a programme is

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7. Hargreaves, David J. (1986) The Developmental Psychology of Music, Cambridge University Press, p.224.

8. Ibid, p.225

always a mixture of both and a mixture which varies from setting to setting."[9]

The emphasis on assessment and evaluation started in U.S.A. during the accountability movement and now there are signs of a movement towards this direction in Great Britain where the new G.C.S.E. examinations are assessed according to nationally prescribed criteria tests for composing, audience listening and performing. An analogous movement is also carried over to general music education with the National Curriculum, in which "assessment of achievement in music will for most pupils be by teachers only."[10] We believe that effective assessment of pupils' musical achievements should be based on the theories and practices of children's musical development, which can offer insights in the field of music education. These theories lie at the centre of the Swanwick-Tillman's musical developmental model, which has generated useful criterion statements for assessing composition, audience-listening and performance. These criterion statements which are dependent on the recognition of qualitative differences rather than quantitative shifts provide objective evidence of pupils' attainment and progress. In this study we have used the criterion statements for assessing musical compositions and we can confirm that the teachers-judges involved have made confident judgements at a high level of consensus.

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[9]. Stenhouse, Lawrence (1975) op. cit., p. 109.

[10]. Department of Education and Science, (1991), National Curriculum, Music for ages 5-14, London, HMSO, p.45.

In the context of the new professionalism in music education the evaluative task might involve the teachers' own evaluations of teaching and learning, which would form the basis for improvement and curriculum development. An extension of this form of evaluation is the classroom or action research which is carried out by the teachers themselves in order to appraise how well they have succeeded in their setting. Furthermore, the evaluative task might involve pupils' opinions and reactions on learning outcomes by reflecting upon them in order to reveal their strengths and weaknesses. Perhaps in a new music programme the formulation of criteria should involve the evaluation of the learning outcomes relating to the effects of audience-listening activities on composition and performance as well as the effects of composition and or performance on pupil's perception of music as audience - listeners.

4.1 Musical Criticism

An alternative vision of assessment, which might be considered an extension of music education, is musical criticism. Although as musical encounters we are involved in making judgements both inside and outside the classroom of various musical activities, such as composition and performance, these judgements are to an extent arbitrary because they are not based on declared criteria.

For instance when we are responding to a work of music sometimes we make judgements which might be no more than a feeling of liking, disliking or indifference something which is felt or sensed, not worked out or analyzed and it is a personal

matter. But if we begin to identify features and components of the musical work concerned and articulate this experience to others then critical analysis is inevitable and aesthetic judgement is developed.

In order to demonstrate objectivity in our criticism it is important to identify criteria upon which our judgements should be based. In my opinion these criteria should be sought after qualitative differences than quantitative shifts. On a statement on musical criticism Swanwick says

> "It is argued that there are five fundamental dimensions of musical criticism: control of sonorities; expressive characterisation; structural relationships; personal evaluation; historical and technical context."[11]

Four of these which are considered as the essential modes of criticism are directly related to the layers of Swanwick-Tillman's spiral of musical development, based on adequate theory, which led Swanwick to draw up criteria for assessing composition, audience-listening and performance. These criteria provide the tools for making objective judgments and justifying these in either written critiques, which are necessary to report on pupil's attainments or in concert reviews which reveal our thoughts and feelings about music and its performance. At the same time the Swanwick's criteria is a valuable tool in the hands of the teacher critic who is expected to report orally or with written critics on pupils attainments and also to the student critic who is expected to develop his individuality and sensitivity on reflecting upon what has been produced. Perhaps the use of these criteria will be a

[11]. Swanwick Keith (1991), Musical Criticism and Musical Development, BJME, Vol.8, No.2, p. 139.

more effective form of assessment and evaluation from employers, other interested groups and parents.

5. The Teacher

One of the factors, which is of primary importance as regards the success of a new music programme is the teacher. Because if all the favourable conditions exist in a school and the right teacher is not there the lesson will be a failure. And the right teacher for teaching music is one who has a deep knowledge and understanding of the child and his development on the one hand and of his subject on the other hand, both theoretical and practical. Arnold Bentley reinforces this point in the following manner:

> "... But to be a successful teacher of children it would appear that, whatever the extent of their knowledge and skills, whatever their other diverse personality traits, they must be at least as interested in the pupils they teach as in the subject(s) they profess. Given such interest in their pupils, they are likely to make the mind to mind contact which is basic to any education; without it, they are not."[12]

The applicability of Swanwick-Tillman's musical development model in Cyprus is closely related to the initial training of teachers and their in service training, both of which should be reorganised according to its epistemological theory and practice. For

[12]. Bentley, Arnold (1975) Music in Education: A Point of View, N F E R Publishing Company Ltd., pp. 17-18.

this purpose extensive training and orientation should be organised on a well planned programme during a transition period in order to prepare a traditionally trained personnel to function in the new music programme.

This effort in my opinion will change the existing situation in Cyprus and it will provide opportunities for teachers to critisize their present performance and change their teaching style.

In this context the rather fragmented work which exists now in Cyprus will move to more challenging areas with sets of sounds organised in small curricula projects serving children's musical development and revealing the uniqueness and significance of music. What should be noted about this approach is that relevant audience-listening material should be used to provide a motivation and influence composing and performing, important musical activities, which develop children's aesthetic sensitivity, nurture their awareness and their potential for communication and expression. For this musical experience to take place the relevant source of stimulus should be used; this is the point Regelski is making when he states.

> "A program leading toward a synergetic responsiveness will be predicated mainly on listening, the most realistic and universally applicable of Action Learning goals. Composition and performance ...will have their role as well, especially in the process called cognitive strengthening"[13]

So the teacher creates the activities through which effective musical learning can be accomplished and a total musical experience can be acquired. This is not the result of concepts based on specific behavioural objectives but it is the interaction and interrelationship of the three parameters of music education those of composing, audience-listening and performing functioning

[13]. Regelski, Thomas A. (1981), Teaching General Music, Schirmer Books, New York, p.252.

as an organic whole with sets of sound leading towards musical involvement. In a music programme oriented in this manner audience-listening activities can influence children in composing. This connection might also be experienced by pupils from the other direction of how composing and performing affect their perception of music as audience - listeners.

6. Classroom Instruments, Accommodation and Equipment

Re-organisation of music in schools according to the emphasis of this study needs an increased number of published teaching aids, instruments, electronic Keyboard laboratory, computers, digital tape recorders, space and other equipment.

Transformation of the traditional music class to a laboratory with the latest technology in which the musical activities recommended so far should be incorporated to promote experiential music learning and individualisation should be the characteristic of music teaching today. In the music laboratory, which should be a special setting providing the proper music environment, all children should be involved in the total musical process with sets of sound organised in expressive musical whole by using the activities recommended for children's self actualization and self expression. In such an approach which aims at qualitative differences and is based on the holistic response to music, the selection of the proper units of material, consisting of sets of sound ordered by level of difficulty, should be provided to children as an expressive musical whole. Since the work in Cyprus will be in a transitory period before full implementation of the new music programme, it is

suggested that the music teachers should work in a mixed system until they maximize their abilities to organise musical activities in an authentic musical context functioning as an organic whole with sets of sound drawn from music. Such work should be relevant to children's musical development and workable throughout all phases of music education including the music education of children with special needs.

All the emphases mentioned in this study could be pursued most effectively through the non-traditional approaches of music in education. It should be stressed that the musical activities are not an end in themselves, but the means to an end. The more that is made of them the more the students will experience musical art. Especially for audience-listening activities the evidence suggests that they have much to offer in promoting and enhancing students ability and expression in composition and perhaps performance. This can be achieved by adopting a new strategy in teaching music, something which may lead to further investigation into a complex yet worthwhile area of research of music in education.

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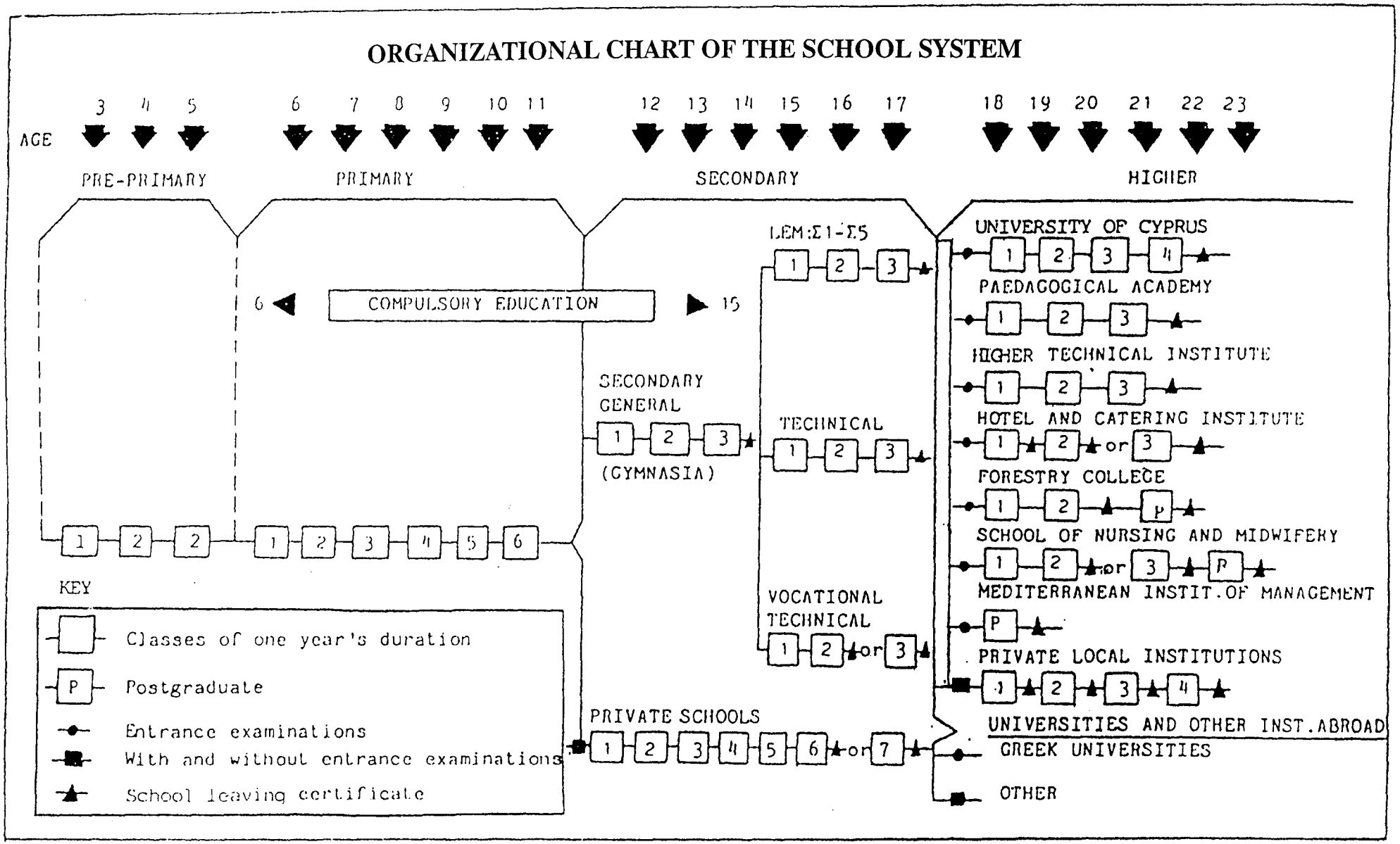
APPENDICES

ORGANIZATIONAL CHART OF THE SCHOOL SYSTEM



Note: LEM: Stands for Lyceums of Optional Subjects

APPENDIX 2

QUESTIONNAIRE

On Data Concerning Schools, Teachers and Pupils Participating in the Experiment.

School.....Date.....

No. of Teachers .....

Teacher's Name .....

Music Specialist .....

Teacher of General Subjects .....

Number of Years as a Teacher .....

Pupil's Name .....

Grade ..... Pupil's Precise Age .....

APPENDIX 3

LIST

Name of Teacher ..... Date		
School		
Length of Service		
SN of Composition	Age	Please, Justify Your Answers
1.		
2.		
3.		
4.		
5.		
6.		
7.		
8.		
9.		
10.		
11.		
12.		
13.		
14.		

APPENDIX 3 Continued

Name of Teacher ..... Date		
School		
Length of Service		
SN of Composition	Age	Please, Justify Your Answers
15.		
16.		
17.		
18.		
19.		
20.		
21.		
22.		
23.		
24.		
25.		
26.		
27.		
28.		

APPENDIX 4

TABLE 6 The Placing of Compositions and Comments of Judges

JUDGE "A"

SN	Estimated Age	Actual Age Yr	mth	Estimated Age Level	Actual Age Level	Comments
1	13	14	2	4	4	"There is logic in the way of thinking and an extended melodic line."
2	11	15	1	3	4	"The technique used (trills, high notes etc) reveals this age. But there is no form in the work; it simply appears to be notes without any relation between them."
3	7 - 8	11	6	2	3	"The use of classroom percussion instruments and the simplicity of the composition."
4	8 - 9	8	2	2	2	"Instability of sounds and limited contrasts."
5	5 - 6	5	10	1	1	"There is no definite and steady rhythm."
6	15	15	9	4	4	"There is a technically developed skill in piano and a logic in the composition."

TABLE 6 **The Placing of Compositions and Comments of Judges**

JUDGE "A" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
7	8 - 9	4 3	2	1	No comments
8	5 - 6	5 10	1	1	"There is no steady rhythm and the notes are produced by chance."
9	10 - 11	7 1	3	2	"There is a structure in the composition and contrasts of sounds."
10	12 - 13	11 3	3	3	"There is duration and structure in the composition as well as a technique in playing the piano."
11	9 - 10	11 6	2	3	No comments
12	8	8 6	2	2	No comments
13	15	15 1	4	4	. "Technically developed skill is combined with beautiful sound and good structure."
14	11	14 4	3	4	No comments

TABLE 6 **Continued**

JUDGE "A" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
15	12 - 13	10 1	3	3	"Specific notes and tremolos combined with a certain technique are used for the performance of this piece."
16	9	4 4	2	1	No comments
17	11	4 3	3	1	"
18	11	11	3	3	"
19	9	8 3	2	2	"
20	15	15 11	4	4	"
21	9	8 3	2	2	"
22	15	15 6	4	4	"
23	8	5 8	2	1	"
24	8	10 9	2	3	"
25	9	8 2	2	2	"
26	8	8 1	2	2	"
27	10	10 9	3	3	"
28	7	5 8	2	1	"

TABLE 6 The Placing of Compositions and Comments of Judges

JUDGE "B"

S.N	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
1	13	14 2	4	4	"The composition is characterized by a clarity in its form and has a flowing melodic line."
2	12	15 1	3	4	"The tune is babbling and unstable. Chromaticism used with success."
3	6	11 6	1	3	"The composition shows an experimentation with simple rhythms and sounds."
4	9	8 2	2	2	"The composition moves within a small range of sounds and within a balanced rhythmic and melodic structure."
5	5	4 3	1	1	"The percussion instruments are used like a new toy and without the intention of impro-vising."
6	16	15 9	4	4	"Coherent musical phrases with an interesting melodic and rhythmic movement. Mature musical thought."

TABLE 6 **Continued**

JUDGE "B" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
7	5	4 3	1	1	"Simple experimentation with musical sounds."
8	6	5 10	1	1	"An effort of a small child to synchronize playing on two percussion instruments."
9	5	7 1	1	2	"The same comments as for the composition No.7."
10	14	11 3	4	3	"Clarity and balance both of phrases and form."
11	11	11 6	2	3	"An attempt to transfer a rhythmic phrase on rhythmic and melodic instruments."
12	8	8 6	2	2	"Simple improvisation with wind instruments and with limited materials."
13	16	15 1	4	4	"Technically developed skill and compositional ability reveal talent and a high level of musical knowledge."

TABLE 6 Continued

JUDGE "B" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
14	14	14	4	4	"Ability to use a big range of notes but without a coherence and balanced musical form."
15	10	10 1	3	3	"Harmonic sequences are used continually in the composition."
16	5	4 4	1	1	"The same comments as in the composition No.7."
17	10	4 3	3	1	"It is made an attempt for experimentation by combining melody and harmony for a better result."
18	13	11	3	3	"The pupil knows how to use the musical experiences he has acquired."
19	8	8 3	2	2	"The pupil is in a position to make music in a simple balanced form."

TABLE 6 **Continued**

JUDGE "B" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
20	16	15 11	4	4	"The student has an ability to compose and uses the instrument with a developed technical skill."
21	6	8 3	1	2	"Simple experimentation with sounds and rhythmic patterns".
22	16	15 6	4	4	"The same comments as in the composition No. 20".
23	5	5 8	1	1	"The same comments as in the composition No.7".
24	6	10 9	1	3	"The same comments as in the composition No.3."
25	7	8 2	2	2	"The composition is relevant to listening activities he experienced."
26	9	8 1	2	2	"The pupil is in position to make with few notes a balanced short composition."

TABLE 6 **Continued**

JUDGE "B" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
27	11 - 12	10 9	3	3	"The pupil uses a certain technically developed skill and makes music according to relevant musical listenings."
28	4 - 5	5 8	1	1	"The same comments as in No 5."

TABLE 6 **The Placing of Compositions and Comments of Judges**

JUDGE "C"

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
1	15	14 2	4	4	"Very good sound and technical skill."
2	15	15 1	4	4	"Good sound and blowing shows that this pupil is in this age. The composition is also good."
3	6	11 6	1	3	No comments
4	9	8 2	2	2	"The blowing in this instrument and the composition show some inexperience."
5	6	5 10	1	1	No comments.
6	15	15 9	4	4	"The composition has a coherence and there is a technically developed skill in playing the piano."
7	5	4 3	1	1	"The composition lacks coherence."

TABLE 6 **Continued**

JUDGE "C" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
8	5	5 10	1	1	"There is no logical musical order".
9	9	7 1	2	2	"There is a coherence in the music which is played on the glockenspiel."
10	14	11 3	4	3	"The performance and the composition..."
11	13	11 6	4	3	"Good flowing rhythm".
12	9	7 1	2	2	"With limited material the pupil tries to express himself but without good blowing into the instrument."
13	15	15 1	4	4	"Very good composition combining good sound with technically developed skill."

TABLE 6 **Continued**

JUDGE "C" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
14	12	14 1	3	4	. "There is no coherence in the composition and no melodic line."
15	12	10 1	3	3	"Good composition with expressive character."
16	6	4 4	1	1	"There is no interesting melodic line, simple notes."
17	8	4 3	2	1	"This composition is slightly better than the former one."
18	10	11	3	3	"There is no very interesting melodic line in the composition."
19	12	8 3	3	2	"The melody has somehow a musical meaning."
20	15	15 11	4	4	"Good composition combined with good playing and sound."

TABLE 6 **Continued**

JUDGE "C" Continued

SN	Estimated Age	Actual Age Yr mth	Estimated Age Level	Actual Age Level	Comments
21	5	8 3	1	2	"Without a coherence."
22	15	15 6	4	4	"Good and interesting composition and playing."
23	6	5 8	1	1	"The whole composition reveals the age of the child."
24	5	10 9	1	3	"The whole composition reveals the estimated age."
25	11	8 2	3	2	"A mediocre composition."
26	7	8 1	2	2	"Without interesting melodic line but a relatively balanced composition."
27	12	10 9	3	3	"Good melodic line combined with relatively good technique."
28	5	5 8	1	1	"The same comments as in the composition. No. 7."

APPENDIX 5

Table of Random Numbers

53 74 23 99 67	61 32 28 69 84	94 62 67 86 24	98 33 41 19 95	47 53 53 38 09
63 38 06 86 54	99 00 65 26 94	02 82 90 23 07	79 62 67 80 60	75 91 12 81 19
35 30 58 21 46	06 72 17 10 94	25 21 31 75 96	49 28 24 00 49	55 65 79 78 07
63 43 36 82 69	05 51 18 37 88	61 38 44 12 45	32 92 85 88 65	54 34 81 85 35
98 25 37 55 26	01 91 82 81 46	74 71 12 94 97	24 02 71 37 07	03 92 18 66 75
02 63 21 17 69	71 50 80 89 56	38 15 70 11 48	43 40 45 86 98	00 83 26 91 03
64 55 22 21 82	48 22 28 06 00	61 54 13 43 91	82 78 12 23 29	06 66 24 12 27
85 07 26 13 89	01 10 07 82 04	59 63 69 36 03	69 11 15 83 80	13 29 54 19 28
58 54 16 24 15	51 54 44 82 00	62 61 65 04 69	38 18 65 18 97	85 72 13 49 21
34 85 27 84 87	61 48 64 56 26	90 18 48 13 26	37 70 15 42 57	65 65 80 39 07
03 92 18 27 46	57 99 16 96 56	30 33 72 85 22	84 64 38 56 98	99 01 30 98 64
62 95 30 27 59	37 75 41 66 48	86 97 80 61 45	23 53 04 01 63	45 76 08 64 27
08 45 93 15 22	60 21 75 46 91	98 77 27 85 42	28 88 61 08 84	69 62 03 42 73
07 08 55 18 40	45 44 75 13 90	24 94 96 61 02	57 55 66 83 15	73 42 37 11 61
01 85 89 95 66	51 10 19 34 88	15 84 97 19 75	12 76 39 43 78	64 63 91 08 25
72 84 71 14 35	19 11 58 49 26	50 11 17 17 76	86 31 57 20 18	95 60 78 46 75
88 78 28 16 84	13 52 53 94 53	75 45 69 30 96	73 89 65 70 31	99 17 43 48 76
45 17 75 65 57	28 40 19 72 12	25 12 74 75 67	60 40 60 81 19	24 62 01 61 16
96 76 28 12 54	22 01 11 94 25	71 96 16 16 88	68 64 36 74 45	19 59 50 88 92
43 31 67 72 30	24 02 94 08 63	38 32 36 66 02	69 36 38 25 39	48 03 45 15 22
50 44 66 44 21	66 06 58 05 62	68 15 54 35 02	42 35 48 96 32	14 52 41 52 48
22 66 22 15 86	26 63 75 41 99	58 42 36 72 24	58 37 52 18 51	03 37 18 39 11
96 24 40 14 51	23 22 30 88 57	95 67 47 29 83	94 69 40 06 07	18 16 36 78 86
31 73 91 61 19	60 20 72 93 48	98 57 07 23 69	65 95 39 69 58	56 80 30 19 44
78 60 73 99 81	43 89 94 36 45	56 69 47 07 41	90 22 91 07 12	78 35 34 08 72
84 37 90 61 56	70 10 23 98 05	85 11 34 76 60	76 48 45 34 60	01 64 18 39 96
36 67 10 08 23	98 93 35 08 86	99 29 76 29 81	33 34 91 58 93	63 14 52 32 52
07 28 59 07 48	89 64 58 89 75	83 85 62 27 89	30 14 78 56 27	86 63 59 80 02
10 15 83 87 60	79 24 31 66 56	21 48 34 06 93	91 98 94 05 49	01 47 59 38 00
55 19 68 97 65	03 73 52 16 56	00 53 55 90 27	33 42 29 38 87	22 13 88 83 34
53 81 29 13 39	35 01 20 71 34	62 33 74 82 14	53 73 19 09 03	56 54 29 56 93
51 86 32 68 92	33 98 74 66 99	40 14 71 94 58	45 94 19 38 81	14 44 99 81 07
35 91 70 29 13	80 03 54 07 27	96 94 78 32 66	50 95 52 74 33	13 80 55 62 54
37 71 67 95 13	20 02 44 95 94	64 85 04 05 72	01 32 90 76 14	53 89 74 60 41
93 66 13 83 27	92 79 64 64 72	28 54 96 53 84	48 14 52 98 94	56 07 93 89 30
02 96 08 45 65	13 05 00 41 84	93 07 54 72 59	21 45 57 09 77	19 48 56 27 44
49 83 43 48 35	82 88 33 69 96	72 36 04 19 76	47 45 15 18 60	82 11 08 95 97
84 60 71 62 46	40 80 81 30 37	34 39 23 05 38	25 15 35 71 30	88 12 57 21 77
18 17 30 88 71	44 91 14 88 47	89 23 30 63 15	56 34 20 47 89	99 82 93 24 98
79 69 10 61 78	71 32 76 95 62	87 00 22 58 40	92 54 01 75 25	43 11 71 99 31
75 93 36 57 83	56 20 14 82 11	74 21 97 90 65	96 42 68 63 86	74 54 13 26 94
38 30 92 29 03	06 28 81 39 38	62 25 06 84 63	61 29 08 93 67	04 32 92 08 00
51 29 50 10 34	31 57 75 95 80	51 97 02 74 77	76 15 48 49 44	18 55 63 77 09
21 31 38 86 24	37 79 81 53 74	73 24 16 10 33	52 83 90 94 76	70 47 14 54 36
29 01 23 87 88	58 02 39 37 67	42 10 14 20 92	16 55 23 42 45	54 96 09 11 06
95 33 95 22 00	18 74 72 00 18	38 79 58 69 32	81 76 80 26 92	82 80 84 25 39
90 84 60 79 80	24 36 59 87 38	82 07 53 89 35	96 35 23 79 18	05 98 90 07 35
46 40 62 98 82	54 97 20 56 95	15 74 80 08 32	16 46 70 50 80	62 72 16 42 79
20 31 89 03 43	38 46 82 68 72	32 14 82 99 70	80 60 47 18 97	63 49 30 21 30
71 59 73 05 50	08 22 23 71 77	91 01 93 20	82 96 59 26 94	66 39 67 98 60

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APPENDIX 6

QUESTIONNAIRE

DATA CONCERNING SCHOOLS AND PUPILS

PARTICIPATING IN THE NEW EXPERIMENT

School .....

Grade and Class .....

The Name and Age of the Pupil .....

Private Music Lessons

Instrument .....

How many years .....

Standard .....

APPENDIX 7

TABLE 16 **Numbered List of Pupils of the Experimental Group by School, Age, Sex and the Series of Composition on the Cassette Tape.**

1. AGE GROUP 4-5

School	No	Pupils	Sex	Age yrs	mth	Series No on Cassette
Kinoniki Merimna Kindergarten	1	Pupil "A"	M	5		7
	2	Pupil "B"	F	5		3
	3	Pupil "C"	M	5		2
	4	Pupil "D"	F	5		8
	5	Pupil "E"	M	5		9
	6	Pupil "F"	F	5		6
	7	Pupil "G"	M	5		4
	8	Pupil "H"	F	5		5
	9	Pupil "I"	M	5		1
	10	Pupil "J"	F	5		10

TABLE 16 **Continued**

1. AGE GROUP 8-9

School	No	Pupils	Sex	Age yrs	mth	Series No on Cassette
Agios Andreas Primary Lower Grades	1	Pupil "A"	F	8		1
	2	Pupil "B"	F	8	6	2
	3	Pupil "C"	M	8		5
	4	Pupil "D"	F	8		3
	5	Pupil "E"	M	9		6
	6	Pupil "F"	F	8		4
	7	Pupil "G"	M	8		7
	8	Pupil "H"	M	8		9
	9	Pupil "I"	M	8		8
	10	Pupil "J"	F	8		10

TABLE 16 Continued

1. AGE GROUP 11-12

School	No	Pupils	Sex	Age yrs	Age mth	Series No on Cassette
Strovolos A Primary School Higher Grades	1	Pupil "A"	M	11	6	1
	2	Pupil "B"	M	11		2
	3	Pupil "C"	M	11	6	3
	4	Pupil "D"	M	11	6	4
	5	Pupil "E"	M	11	6	5
	6	Pupil "F"	F	11	6	6
	7	Pupil "G"	F	11	6	7
	8	Pupil "H"	F	11	6	8
	9	Pupil "I"	F	11		9
	10	Pupil"J"	F	11	6	10

TABLE 16 **Continued**

4. AGE GROUP 14 - 15

School	No	Pupils	Sex	Age yrs	mth	Series No on Cassette
Acropolis Gymnasium	1	Pupil "A"	M	14	6	1
	2	Pupil "B"	M	14		2
	3	Pupil "C"	M	14		3
	4	Pupil "D"	M	15		8
	5	Pupil "E"	M	15		7
	6	Pupil "F"	F	15		9
	7	Pupil "G"	F	14		10
	8	Pupil "H"	F	14		4
	9	Pupil "I"	F	14		5
	10	Pupil "J"	F	15		6

APPENDIX 8

TABLE 19 **Numbered List of Pupils of the Control Group by School, Age, Sex and the Series of Composition on the Cassette Tape.**

1. AGE GROUP 4 - 5

School	No	Pupils	Sex	Age		Series No on Cassette
				yrs	mth	
Kinoniki Merimna	1	Pupil "A"	M	5	3	1
	2	Pupil "B"	F	5	6	2
	3	Pupil "C"	F	5	6	3
	4	Pupil "D"	F	5		4
	5	Pupil "E"	M	5		5
	6	Pupil "F"	F	4	7	6
	7	Pupil "G"	M	5	4	7
	8	Pupil "H"	F	5	6	8
	9	Pupil "I"	M	5		9
	10	Pupil "J"	M	5		10

TABLE 19 **Continued**

2. AGE GROUP 8 - 9

School	No	Pupils	Sex	Age		Series No on Cassette
				yrs	mth	
Aghios Andreas Primary Lower Grades	1	Pupil "A"	F	8		1
	2	Pupil "B"	M	8		10
	3	Pupil "C"	F	8		3
	4	Pupil "D"	F	8		2
	5	Pupil "E"	M	8	6	7
	6	Pupil "F"	M	8		9
	7	Pupil "G"	M	8		8
	8	Pupil "H"	M	8		6
	9	Pupil "I"	F	8		5
	10	Pupil "J"	F	8		4

TABLE 19 **Continued**

3. AGE GROUP 11 - 12

School	No	Pupils	Sex	Age		Series No on Cassette
				yrs	mth	
Strovolos A Primary Higher Grades	1	Pupil "A"	F	12		1
	2	Pupil "B"	F	12		2
	3	Pupil "C"	F	12		3
	4	Pupil "D"	F	12		4
	5	Pupil "E"	F	12		5
	6	Pupil "F"	M	11	6	6
	7	Pupil "G"	M	11		7
	8	Pupil "H"	M	11	6	8
	9	Pupil "I"	M	11	6	9
	10	Pupil "J"	M	11		10

TABLE 19 **Continued**

4. AGE GROUP 14 - 15

School	No	Pupils	Sex	Age		Series No on Cassette
				yrs	mth	
Akropolis Cymnasium	1	Pupil "A"	M	14		1
	2	Pupil "B"	M	14		2
	3	Pupil "C"	M	14		3
	4	Pupil "D"	M	14		5
	5	Pupil "E"	F	14		6
	6	Pupil "F"	F	14		10
	7	Pupil "G"	F	14		8
	8	Pupil "H"	F	14		9
	9	Pupil "I"	F	14		7
	10	Pupil "J"	M	14		4

APPENDIX 9

CRITERIA FOR ASSESSING COMPOSITION TRANSLATED INTO GREEK

ΚΡΙΤΗΡΙΑ ΑΞΙΟΛΟΓΗΣΗΣ ΜΟΥΣΙΚΩΝ ΣΥΝΘΕΣΕΩΝ

Επίπεδο των αισθήσεων	Σ'αυτό το επίπεδο, είναι έκδηλη η ευχαρίστηση που νιώθουν τα παιδιά με τον ήχο, από τις ακραίες εντάσεις του ήχου (πολύ δυνατός και πολύ σιγανός). Υπάρχουν επίσης δυνατότητες για εξερεύνηση και πειραματισμό με όργανα. Η οργάνωση του υλικού από τα παιδιά είναι αυθόρμητη, πιθανό ακανόνιστη κι ο χρόνος είναι ασταθής. Οι ποικιλίες του ηχοχρώματος φαίνεται να μην έχουν δομική ή εκφραστική σπουδαιότητα.
Επίπεδο χειρισμού των μουσικών οργάνων	Σ'αυτό το επίπεδο, ο χειρισμός των μουσικών οργάνων γίνεται με κάποιο έλεγχο και είναι δυνατές οι επαναλήψεις. Μπορεί να υπάρχει σταθερός χρόνος και παράλληλα ν' αναπτύσσονται από τα παιδιά τεχνικές που σχετίζονται με την κατασκευή, τη δομή και την ιδιαιτερότητα των οργάνων που

διαστήματα, τρίλιες και τρέμολο. Οι συνθέσεις τείνουν να είναι μεγάλες με επαναληπτικά στοιχεία καθώς ο συνθέτης απολαμβάνει την ικανοποίηση που προσφέρει ο έλεγχος πάνω στο όργανο.

Επίπεδο προσωπικής έκφρασης

Η εκφραστικότητα είναι φανερή σε αλλαγές που σχετίζονται με την ταχύτητα και την ένταση του ήχου. Στις συνθέσεις των παιδιών διαφαίνονται απλές φράσεις - μουσικές εκφράσεις - που δεν είναι πάντοτε δυνατό να επαναλαμβάνονται επακριβώς. Υπάρχει δράμα, διάθεση ή ατμόσφαιρα, που ίσως συναρτάται με μια εξωγενή "προγραμματική" ιδέα. Υπάρχει λίγος δομικός έλεγχος και η εντύπωση είναι ο αυθορμητισμός χωρίς την ανάπτυξη ιδεών.

Συμβατικό επίπεδο

Σ'αυτό το επίπεδο, εμφανίζονται ρυθμικά και μελωδικά σχήματα που μπορούν να επαναλαμβάνονται. Οι συνθέσεις είναι μάλλον μικρές και μπορούν να λειτουργούν σε καθιερωμένα μουσικά συμβατικά πλαίσια. Οι μελωδικές φράσεις μπορούν να ταξινομηθούν

σε δύο, τέσσερα ή οκτώ μέτρα. Η μετρική οργάνωση της μουσικής συνδυάζεται με τεχνικές που περιλαμβάνουν συγκοπές, μελωδικά και ρυθμικά οστινάτι και αλυσίδες. Οι συνθέσεις παρουσιάζουν επιδράσεις από άλλες μουσικές εμπειρίες, όπως το τραγούδι, το παίξιμο σε όργανα και την ακρόαση και είναι σε κάποιο βαθμό προβλεπτές.

Στοχαστικό επίπεδο

Οι συνθέσεις προχωρούν πιο πέρα από τη θεληματική επανάληψη σχημάτων. Γίνονται παρεκκλίσεις και ξαφνιάσματα που πιθανό να μη διαπλέκονται εντελώς με το κομμάτι. Υπάρχουν εκφραστικά χαρακτηριστικά που υπόκεινται σε πειραματισμό, διευρεύνηση δομικών δυνατοτήτων και αναζήτηση αντιθέσεων ή παραλλαγών σε καθιερωμένες μουσικές ιδέες. Ύστερα από την καθιέρωση συγκεκριμένων σχημάτων, η συνηθισμένη τεχνική που ακολουθείται στη σύνθεση είναι η εισαγωγή πρωτότυπου τέλους.

Ιδιωματικό επίπεδο

Σ'αυτό το επίπεδο, δομικά ξαφνιάσματα διαπλέκονται σε ένα ύφος που μπορεί να

αναγνωρισθεί. Η αντίθεση και η παραλλαγή βασίζονται σε μοντέλα και καθαρές ιδιωματικές πρακτικές, που συχνά αλλά όχι πάντα αντλούνται από λαικές μουσικές παραδόσεις. Η αρμονική και η οργανική αυθεντικότητα της σύνθεσης είναι σημαντική. Απαντητικές φράσεις, η ερώτηση και η απάντηση, η παραλλαγή με επεξεργασία και αντιθετικά στοιχεία είναι κοινά. Σε μεγαλύτερες συνθέσεις εκδηλώνεται τεχνικός, εκφραστικός και δομικός έλεγχος.

Συμβολικό επίπεδο

Σ'αυτό το επίπεδο, η τεχνική δεξιότητα υπηρετεί τη μουσική επικοινωνία. Η προσοχή εστιάζεται σε μορφολογικές σχέσεις και σε εκφραστικό χαρακτήρα, που μαζί ενσωματώνονται σε μια εντυπωσιακή, συνεπή και πρωτότυπη μουσική. Ιδιαίτερες ομάδες ηχοχρωμάτων, γυρίσματα φράσεων και αρμονικών συνδέσεων μπορούν ν'αναπτυχθούν και να τους δοθεί ιδιαίτερο ενδιαφέρον. Υπάρχει ένα δυνατό αίσθημα προσωπικής δέσμευσης.

Συστηματικό επίπεδο

Πέρα από τις ιδιότητες των προηγουμένων επιπέδων, τα έργα μπορούν να βασίζονται σε νεοφανή μουσικά υλικά, όπως κλίμακες, σειρές, νέα συστήματα αρμονίας, ηλεκτρονικούς ήχους ή στην τεχνολογία με ηλεκτρονικούς υπολογιστές. Οι δυνατότητες της μουσικής σύνθεσης συστηματικά διευρύνονται.

APPENDIX 10

JUDGEMENTS TO CRITERION ASSIGNMENT OF EACH COMPOSITION

GROUP 1

Item No	Sensory	Manipu-lative	Personal	Verna-cular	Specu-lative	Idiomatic	Sym bo-lic	Systema-tic
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

APPENDIX 10 Continued

JUDGEMENTS TO CRITERION ASSIGNMENT OF EACH COMPOSITION GROUP 2

Item No	Sensory	Manipu lative	Personal	Verna cular	Specu- lative	Idiomatic	Symbo- lic	Systema -tic
1								
2								
3								
4								
5								
6								
7								
8								
9								
10								
11								
12								
13								
14								
15								
16								

THESIS CONTAINS TAPE CASSETTE

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